Today

The magazine of the Medical College of Georgia

Spring 2006

Volume 33 Number 4

Ready, Set... STOP

Groundbreaking Sickle Cell Research Continues to Shape Treatment

Optimizing Primary Stroke Prevention in Children with Sickle Cell Anemia STOP II

V for Valor

Resident receives a Bronze Star for heroism in Iraq.

'Please, Just Come'

Physician reaches out to earthquake victims.

From the Presidents

Biomedical research is seldom a solitary endeavor.

That's a good thing. The more people who study a problem, and from the most perspectives possible, the better the outcome is likely to be. MCG is a proud participant in this approach, frequently collaborating with scientists nationwide and beyond.

But occasionally, a single institution emerges as a true leader in a particular field of research. At the risk of seeming immodest, I can't help but shine the spotlight on MCG in the field of sickle cell research.

Actually, modesty doesn't factor much into the equation, because MCG's extraordinary progress in this arena largely predates my administration. It was in 1972 that MCG became one of the first Comprehensive Sickle Cell Centers in the country, overseen by a true pioneer in the field, Dr. Titus H.J. Huisman.

Since then, MCG has broken ground in every facet of the disease. In 1992, Drs. Robert J. Adams and Virgil C. McKie demonstrated that transcranial Doppler could identify pediatric sickle cell patients' stroke risk—a risk that can be largely eliminated with regular blood transfusions. This finding has virtually transformed sickle cell treatment and has spared countless children the agonizing and debilitating effects of a stroke.

This edition of *MCG Today* updates the progress, particularly the finding that the stroke risk generally resumes when transfusions cease. Several related articles cite advances in other areas of sickle cell treatment. MCG is proud to play a leading role in tackling an insidious disease that strikes so many Georgians.

On another note, you may recall that the winter 2006 edition of *MCG Today* highlighted the many efforts of the MCG community to extend its reach far beyond the confines of campus. Well, those efforts simply never stop. This edition profiles the volunteerism of Dr. Haroon Choudhri in the wake of the devastating Pakistan earthquake and the heroism of MCG resident Rich Jadick in Iraq, profiled on the cover of *Newsweek* magazine.

Please read about these accomplishments and many, many others inside. ➸

Sincerely,

Daniel W. Rahn M.D.

Daniel W. Rahn, M.D.
President, Medical College of Georgia

Nothing strikes fear in the average person like the thought of surgery. The mere idea of someone slicing open your body, invading it with steel instruments and removing your tissue is enough to make any of us curl into the fetal position. Added worries include the length of recovery time, potential pain during the healing process and residual and often permanent scarring.

Pardon the pun, but cutting-edge surgical techniques now make much of that apprehension a thing of the past for some patients. Minimally invasive laparoscopic and endoscopic techniques are among the latest in a host of surgical advances that are happening every day at MCG Health System. Whether our surgeons pioneer some techniques or master others, our patients are placed at the center of care delivery and benefit from these methods by having less blood loss, faster recovery times, less scarring, less pain and other physical and emotional comforts.

Over the past five years, we invested $72.5 million in improving our facilities and technologies, including our surgical capabilities. We have acquired, replaced or upgraded our state-of-the-art anesthesia machines, operating room instruments and equipment, including acquiring a Stryker Navigational System. We also have consolidated our ambulatory surgical unit into one space for the comfort and convenience of our patients. Renovated anesthesia office space and operating rooms have increased the efficiency of caregivers and patient safety.

Consistent with the national trend, we are installing a more aggressive security system at surgical access points to meet Joint Commission on Accreditation of Healthcare Organizations standards. Future plans call for us to build an adult endosuite.

As Dr. David Terris says, "This isn't your father's OR." I hope you enjoy the article on page 16, and learn more about how new tools and techniques have revolutionized how surgeons care for their patients. ➸

Sincerely,

Don Snell

Don Snell
President and Chief Executive Officer
MCG Health, Inc.

MCG Today
The magazine of the Medical College of Georgia
Spring 2006
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Sickle Cell Treatment

Ready, Set...STOP

Groundbreaking sickle cell research continues to shape treatment.

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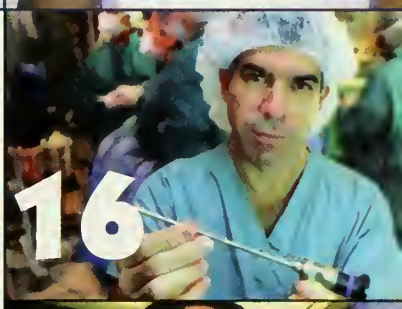
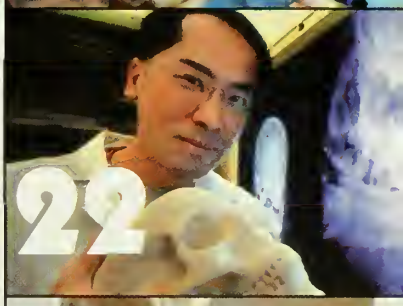
Breathing Easier
Nitric oxide may help sickle cell patients.

'Like a New Life'
Advances in sickle cell treatment open the door to happy childhoods.



Minimal Disruption, Maximal Satisfaction
Surgical techniques put surgeons on the cutting edge.



A Perfect Mix
An MCG oral surgeon helps future generations bone up on implants.

Willing and Able
Encouragement and adaptations help a student overcome her disability.

MCG President: *Daniel W. Rahn, M.D.*
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NEWS BRIEFS

Student Satisfaction

MCG is performing higher than the state and national averages in several key areas of student engagement, according to a recent national survey.

"We believe that our curriculum and the faculty/student ratio encourage collaboration and a high level of engagement between faculty and students," said Dr. Mike Miller, vice president of enrollment and student services.

MCG participated in the National Survey of Student Engagement along with other four-year institutions of the University System of Georgia. The survey measures an institution's educational effectiveness against comparison groups using five key benchmarks: level of academic challenge, supportive campus environment, student-faculty interaction, enriching educational experiences and active and collaborative learning. MCG scored equal to or higher than other like participating universities in each of the categories.

Healing Hands and a Giving Heart

Dr. Joseph M. Still Jr.

His healing touch eased the pain of thousands, and his generosity ensured a lasting legacy to humanity.

Dr. Joseph M. Still Jr., a 1965 graduate of the MCG School of Medicine, died Feb. 1 at age 67.

After earning his medical degree from MCG, Dr. Still completed a general surgery residency at MCG, a plastic surgery residency at Duke University Medical Center and a hand fellowship at the Kleinert Institute in Louisville, Ky. Dr. Still founded MCG's Section of Plastic and Reconstructive Surgery in 1972 and went on to found the Joseph M. Still Burn Center at Augusta's Doctors Hospital.

"He built the center up to a 58-bed unit serving more than 2,000 patients a year from throughout the Southeast," said MCG President Daniel W. Rahn. "He was tireless in his efforts to help patients regain not only their health, but their quality of life. His contributions to health care—and to the well-being of countless individual patients—are enormous."

In 2005, Dr. Still and fellow MCG alumnus Dr. Robert F. Mullins pledged $600,000 over five years to MCG's Joseph M. Still Jr. Endowed Chair Fund in Plastic Surgery. The donation established a permanent fund to support an established clinician, researcher and educator in plastic surgery.

STAR Performance

Dr. J. Charles Eldridge, an MCG School of Graduate Studies alumnus and Wake Forest University professor of physiology and pharmacology, has donated $5,000 to establish an endowment for MCG's STAR program.

The endowment will fund an annual prize for undergraduate students attending the MCG School of Graduate Studies Summer Training and Research program, which helps highly motivated undergraduates develop skills as young scientists. The Outstanding STAR Student Award is presented at the end of each STAR session. The $150 award recognizes outstanding undergraduate research accomplishments and overall scientific potential. Dr. Eldridge has anonymously funded the prize for the past three years and wanted to establish permanent support.

Individualized Dosages

Technology to individualize medicine dosages is being used for the first time at MCG.

The **AmpliChip CYP450 Test**, developed by Roche Diagnostics, analyzes variations of the two major genes involved in metabolizing about 25 percent of all drugs. MCG's molecular diagnostic lab is a Roche Diagnostics Molecular Center of Excellence and the first academic center in the country to acquire this technology.

MCG initially will use the test to optimize doses of commonly used psychiatric drugs, according to Dr. Stephen C. Peiper, chair of the MCG Department of Pathology and a Georgia Cancer Coalition Distinguished Cancer Clinician and Scientist.

CYP450 is a major subset of metabolizing genes, and the Roche test looks for variations of two of those genes, CYP2D6 and CYP2C19. The genes are highly expressed in the liver, according to Dr. Zixuan (Zoe) Wang, molecular biologist and scientific director of MCG's Georgia Esoteric and Molecular Diagnostic Labs, L.L.C., where the new technology is housed.

The test uses a blood sample to determine how quickly a patient metabolizes a specific drug. Generally speaking, the slower the metabolism, the lower the dosage needs to be to optimize efficacy and minimize the risk of side effects.

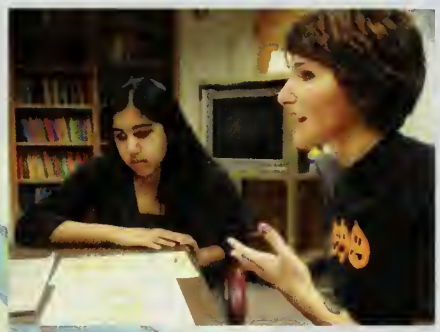
"Many drugs work through these pathways," said Dr. Wang. "Side effects are the fourth leading cause of death in the United States, and most of the side effects are associated with the genotype."

A Room with a View

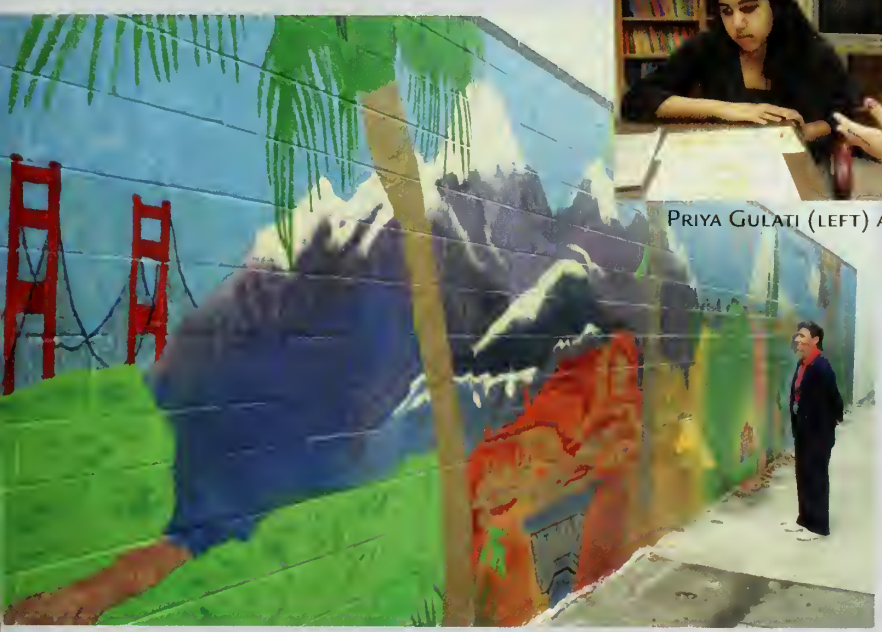
Residents at Augusta's Georgia War Veterans Nursing Home have a room with a view, thanks to more than 20 MCG students and local Senior Girl Scout Priya Gulati.

"When I volunteered at the nursing home, one of the first things I noticed was the view from the dining room – a stark white cinderblock wall," said Priya, 17, a senior at Lakeside High School. "I wanted to do something nice for the residents, so I decided to improve the scenery for them."

MCG students volunteered Nov. 5 to help Priya create a mural on the back wall of the Medical Center Inn, located just a few feet from the nursing home's dining hall windows.



Priya Gulati (left) and Emily Ullo



"This project appealed to us because it was so well-planned, with wonderful intentions and implications for the local community," said Emily Ullo, a second-year medical illustration student. "As student artists, it's great to be able to take a break from our rigorous schedules to create something that will brighten daily life for the nursing home residents."

Dr. Dean Harrell, an MCG professor and family physician with a special interest in geriatrics, served as Priya's advisor for the mural's content: a rendering of the United States that includes many blue and green hues, colors thought to produce a calming effect for elderly patients with dementia.

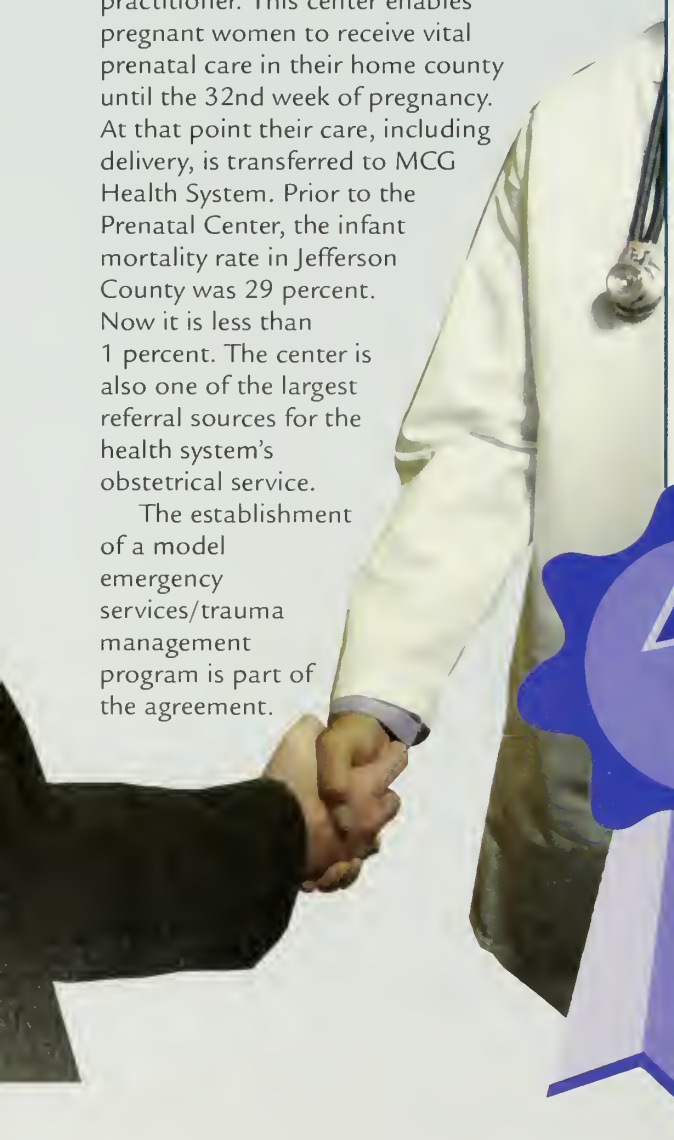
Priya's project has been approved for the Girl Scouts' highest honor, the Girl Scout Gold Award.

A New Partner

The MCG Health, Inc. Board of Directors has approved an affiliation agreement with Jefferson Hospital in Louisville, Ga. This agreement is similar to those with four Critical Access Hospitals in other rural counties.

MCG Health, Inc. has worked with Jefferson Hospital on various health care projects, including the Jefferson Hospital Prenatal Center, which is staffed by an MCG Health, Inc. nurse practitioner. This center enables pregnant women to receive vital prenatal care in their home county until the 32nd week of pregnancy. At that point their care, including delivery, is transferred to MCG Health System. Prior to the Prenatal Center, the infant mortality rate in Jefferson County was 29 percent. Now it is less than 1 percent. The center is also one of the largest referral sources for the health system's obstetrical service.

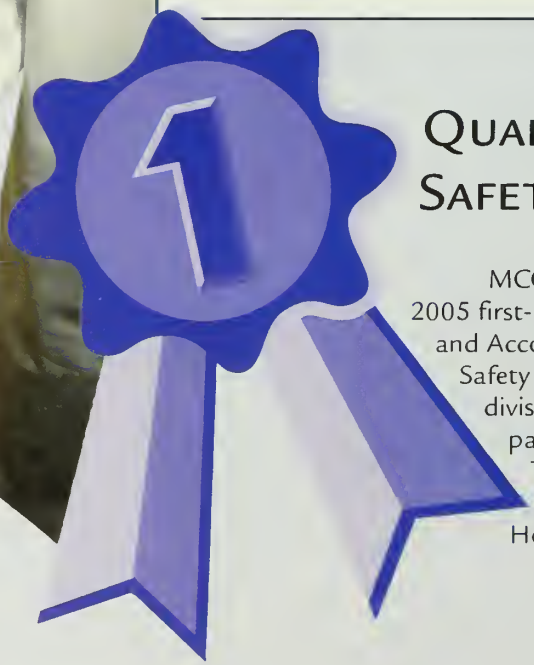
The establishment of a model emergency services/trauma management program is part of the agreement.



Stamp of Approval

MCG Health System is the co-winner of the National Research Corp.'s 2005 Consumer Choice Award. Previous wins came in 2001 and 2003. The health system was judged most preferred for all health needs, and to have the best doctors, the latest technology and equipment, the widest range of services and the most frequently used Web site.

Since 1996, the NRC has given the award to hospitals in the top 100 markets in the nation based on consumer perceptions of quality and image.



Quality, Safety Lauded

MCG Health System won the 2005 first-place Partnership for Health and Accountability Quality and Patient Safety Award in the 300-plus beds division for its efforts to reduce patient infection rates.

The partnership is a program of the Georgia Hospital Association.

Keeping the Beat

MCG Health System therapists are using a computer-based interactive metronome to treat adults and children with attention deficit-hyperactivity disorder and other cognitive, physical and learning disorders. Patients use headphones to listen to auditory tones that mimic a metronome's steady timing and rhythm. They then perform a series of exercises where they clap or tap in time to the tones while wearing special gloves or standing on a floor that records their responses. Guide tones alert the patient if their response is on time, early or late.

Learning to keep time with the beat has been found to profoundly affect attention, coordination, self-control, motor control and even reading, math and language processing.

Radiothon a Ringing Success

The fifth annual Cares for Kids Radiothon, hosted in December by WBBQ 104.3 FM and WIBL 105.7 FM, raised more than $92,000 for the MCG Children's Medical Center, approximately $20,000 more than last year's total. It is one of the hospital's largest fund-raisers.

My HealthLink Piloted

MCG Health System is phasing in My HealthLink to offer patients greater access to their physicians and relevant health information in a convenient, easy-to-use format. Patients use their online accounts to record their personal health record and keep track of allergies, immunizations, prescriptions, medical procedures and doctor visits. They can also send private messages to their doctors and access drug information. Patients simply plug in the medication they are taking and a database will alert them if one drug interferes with another.

My Healthlink also offers a diabetes-specific condition center where participating patients send their blood sugar information to their physicians.

Neuroscience Excellence

The MCG Neuroscience Center of Excellence recently earned the distinction of "Institute." This designation is the result of a national survey to identify the most progressive neuroscience programs known for their early adoption of technology and advanced clinical programs.

NeuroSource Inc., a health care consulting company specializing in the neurosciences, and HealthTech, a non-profit research and education organization, conducted the survey.

You're the Best

Nearly half of the 179 Augusta-area physicians named to the list of Best Doctors in America for 2005-06 are MCG Health System physicians. The list is compiled annually through a peer review-based evaluation of more than 1 million members of the medical profession.

The MCG physicians are:

Allergy and Immunology
Dr. William K. Dolen
Dr. Dennis R. Ownby
Dr. Betty B. Wray

Anesthesiology
Dr. Eugene K. Betts
Dr. James Mayfield

Dermatology
Dr. Loretta M. Davis
Dr. Jack L. Lesher Jr.

Infectious Disease
Dr. Daniel Baxter Craig
Dr. John F. Fisher
Dr. David R. Haburchak
Dr. J. Peter Rissing

Internal Medicine (General)
Dr. Laura L. Mulloy

Family Medicine
Dr. Michael Felz
Dr. Paul D. Forney
Dr. Julia Ellen Hendrich

Hand Surgery
Dr. Simeon Marcus Fulcher

Medical Genetics
Dr. Lawrence C. Layman

Medical Oncology and Hematology
Dr. Anand Jillella

Nephrology
Dr. Laura L. Mulloy
Dr. Steve Schwab

Neurological Surgery
Dr. Mark R. Lee

Neurology
Dr. Robert J. Adams
Dr. David C. Hess
Dr. Mary D. Hughes
Dr. J. Ned Pruitt II
Dr. Michael H. Rivner
Dr. Kapil D. Sethi

Neurology (Child)
Dr. James E. Carroll

Obstetrics and Gynecology
Dr. Lawrence D. Devoe
Dr. Sharad A. Ghamande
Dr. Lawrence C. Layman
Dr. Michael Scott Macfee
Dr. Barry Miles Wolk

Ophthalmology
Dr. David D. Bogorad
Dr. Stephanie L. Goei
Dr. Parag A. Gokhale
Dr. Julian Nussbaum
Dr. Dilip Thomas

Orthopaedic Surgery
Dr. Styles Leslie Bertrand
Dr. Raymond Scott Corpe
Dr. Walton W. Curl
Dr. David Montgomery (Monte) Hunter
Dr. Jonathan Pellett
Dr. Michael Tucker

Otolaryngology
Dr. Mitchell Byrne Austin
Dr. Christine G. Gourin
Dr. Stilianos E. Kountakis
Dr. Gregory Postma
Dr. David J. Terris

Pediatrics (General)
Dr. Reda Bassali
Dr. Karen Carter
Dr. Karen J. M. Foushee
Dr. Davidson L. Freeman
Dr. Kimberly Jester
Dr. Kathryn McLeod

Pediatric Specialist
Dr. Jatinder Bhatia
Dr. Margaret F. Guill
Dr. Rita S. Jerath
Dr. William Lutin
Dr. Andrew B. Muir
Dr. Dennis Murray
Dr. Roger A. Vega
Dr. Henry B. Wiles

Plastic Surgery
Dr. Kenna S. Given
Dr. Jack C. Yu

Psychiatry
Dr. Peter F. Buckley
Dr. Jeffrey L. Rausch
Dr. Sandra Bishop Sexson

Pulmonary and Critical Care Medicine
Dr. W. Bruce Davis

Radiation Oncology
Dr. W. Chris Sheils

Surgery
Dr. Robyn Maurice Hatley
Dr. Charles G. Howell Jr.
Dr. Bruce V. MacFadyen Jr.
Dr. Joseph Sheppard Mondy III
Dr. James J. Wynn

Surgical Oncology
Dr. David Scott Lind

Thoracic Surgery
Dr. James St. Louis

Urology
Dr. Ronald W. Lewis

Reasons for Relapse

Inbred strains of rats differ in how aggressively they seek cocaine after a few weeks of use, researchers say.

The finding, posted online January 18 by *Psychopharmacology*, is another piece of evidence that genetics plays a role in the relapse of drug-seeking behavior in humans, said Dr. Paul J. Kruzich, MCG behavioral neuroscientist and lead study author.

It also cites the role of glutamate, a neurotransmitter involved in learning and memory, in stirring the cravings and uncontrollable urges that drive some drug users to use again.

"All persons addicted to psychostimulants can relapse, but potentially some are a little more susceptible than others; it's all about gene-environment interaction."
– Dr. Paul J. Kruzich

"All persons addicted to psychostimulants can relapse, but potentially some are a little more susceptible than others; it's all about gene-environment interaction," said Dr. Kruzich.

He took two strains of inbred rats – Fischer 344 and Lewis – with known genetic differences, enabled each to self-adminster cocaine for 14 days, then removed the drug for a week but not the levers the animals used to access it. During that hiatus, he adminstered a drug that stimulates glutamate receptors, possible targets for drugs of abuse. He found that the F344 strain worked harder to get cocaine than the Lewis rats following treatment with the glutamate drug, suggesting they were more susceptible to relapse.

"Maybe 12-step programs and faith-based programs will be enough to keep some people from relapsing," said Dr. Kruzich. "For others, we may have to come up with medical treatments we can use on top of those to keep them from taking drugs again."

Rapid Assessment

MCG Health System has formed a Rapid Assessment Team—consisting of an intensive care nurse, respiratory therapist and physician—to help reduce patient mortality and morbidity. The team works alongside the code team in advance of a code to improve the conditions of acutely deteriorating patients, with one important difference: "The Rapid Assessment Team is available 24/7 to rush to the bedside to prevent, not respond to, cardiac arrest. Patients usually show signs that cardiac arrest is imminent, such as low blood pressure, or a change in heart or respiratory rate," said Dr. John Hitt, who was recently appointed to the newly created position of vice president of outcomes management.

The team is the first piece of a comprehensive patient quality plan that will include improved coding, operational efficiency and data coordination.

Ready, Set ... STOP

Groundbreaking Sickle Cell Research Continues to Shape Treatment

Stopping regular blood transfusions in children with sickle cell disease who are at risk for a stroke means their stroke risk likely will return, researchers have found.

A study of children whose stroke risk was reduced by blood transfusions found that within a few months of halting transfusion, 14 of the 41 children resumed at-risk status and two children had strokes, said Dr. Robert J. Adams, neurologist and stroke specialist at the Medical College of Georgia who authored the article in the Dec. 29 edition of the *New England Journal of Medicine*.

None of the 38 children who continued transfusions resumed at-risk status or had a stroke.

"We hoped that maybe we were dealing with something that was relatively short-lived over a few years in a child's life," said Dr. Adams. "Most of the time, that doesn't seem to be the case. Although there were eight children in the halted-transfusion arm that were followed for more than 25 months without any apparent problem, they were the minority and we have no way to predict who they are."

The study, headquartered at MCG and involving 25 sites in North America, was to enroll 100 patients, but the Data and Safety Monitoring Board appointed by the National Heart, Lung and Blood Institute recommended early closure in late 2004 because so many children resumed their at-risk status. The institute issued a clinical alert in December 2004 to coincide with the closure saying the 10 percent of children with sickle cell disease who have a high stroke risk need ongoing transfusions.

The institute funded the $11 million STOP II study looking at whether children needed to continue transfusions after

Dr. Robert J. Adams

"These results suggest that if stroke is to be prevented after transfusion is stopped, transcranial Doppler examinations must be performed at frequent intervals and transfusions resumed expeditiously."

– Dr. Robert J. Adams

LEFT: HEALTHY RED BLOOD CELL; RIGHT: SICKLED CELL

their stroke risk normalized. That followed another NHLBI-funded study, led by MCG, which showed monthly transfusions cut stroke risk by 90 percent.

STOP II participants included patients identified at risk by abnormal blood flow studies of their brain whose studies had normalized after at least 30 months of transfusion; participants were randomized to either continue or halt transfusion.

The two strokes occurred shortly after a single abnormal transcranial Doppler study, which uses ultrasound to measure blood flow through the brain, and before confirmatory tests could be performed.

Drs. Adams and Virgil C. McKie, MCG Professor Emeritus of Pediatrics, demonstrated the painless, relatively inexpensive transcranial Doppler could identify children at risk in a *New England Journal of Medicine* article in 1992. Their work to identify and help at-risk children began after Dr. McKie came to Dr. Adams with concerns that some of his young patients with sickle cell disease were experiencing strokes.

End points for the STOP II study included a reversion to an abnormal transcranial Doppler or a stroke. Almost half the children in the halted transfusion arm experienced an end point within 10 months, some in as few as two months.

Dr. Adams noted data on nine patients in the halted transfusion arm were censored because they either resumed transfusion or began taking Hydroxyurea, a drug to treat the pain crises that are a hallmark of sickle cell disease.

One child who had a stroke had his first abnormal Doppler about eight months after halting transfusions and a stroke 14 days later. The second stroke occurred in a child eight days after his first abnormal study.

"I think it's clear that some people are going to look at these findings and suggest if we do Doppler exams often

continued

enough, we can get children off transfusions," said Dr. Adams. "But children in STOP II had frequent Doppler exams, much more frequently than likely would be used in usual clinical practice, and there were still problems." Participants had Doppler exams at least every 12 weeks and more frequently when any abnormality was found.

Of the 209 children enrolled in the two STOP studies, 20 had strokes and all those had abnormalities on their most recent exam. This confirms the technique's efficacy as a stroke indicator before transfusions are started and after they are stopped, according to the study.

"These results suggest that if stroke is to be prevented after transfusion is stopped, transcranial Doppler examinations must be performed at frequent intervals and transfusions resumed expeditiously," Dr. Adams wrote.

Two children in the original STOP study had strokes despite being on transfusion, probably because their disease was so advanced when treatment began, Dr. Adams said. STOP, which followed 130 at-risk children, also was halted early because of the dramatic findings of a 90 percent reduction in stroke risk. A physician advisory issued by the NHLBI in September 1997 recommended regular transcranial Doppler studies in children age 2-16 with sickle cell disease and that transfusion be considered for those at risk.

That's what Dr. McKie, who now works part time in the MCG Pediatric Sickle Cell Clinic, recommends.

"I'm not surprised at how effective transfusion is," Dr. Adams said, noting that most children tended to do well on transfusion, with higher hemoglobin levels, fewer pain crises and cases of acute chest syndrome, better liver function and just generally improved quality of life.

However, transfusions are not without problems. No transfusion-related infections were reported, but nine transfusion reactions were reported in STOP II, including one that required hospitalization.

Also, iron overload, which damages vital organs, necessitated chelation therapy five nights a week for most transfusion recipients to remove excess iron. Patients and families don't like the time-consuming and expensive therapy, Dr. McKie said, noting an oral therapy approved this year by the Food and Drug Administration may make chelation more palatable. *(see article on facing page.)*

Many fundamental questions remain, including why these 10 percent of children have problems with stroke and how transfusion works to stop them. Whether there are better options than transfusion is another.

Dr. Adams' research team is providing neurological and transcranial Doppler expertise for a study coordinated by St. Jude's Children's Research Hospital that should help determine whether Hydroxyurea is one option. The study is comparing the drug to transfusion as a way to prevent second strokes. Dr. Adams doubts Hydroxyurea will be as effective, especially in patients who already have severe abnormalities in their blood vessels. But "if this were to work in secondary prevention, it would be obvious to study it in primary prevention as well. We'll be watching it," Dr. Adams said. ➸

Toni Baker

Dr. Abdullah Kutlar

Ironing Out the Problem

Pill Eases Treatment of Iron Overload

A tiny pill may have helped solve one big problem with chronic blood transfusions.

Despite best efforts to make the nation's blood supply safe, physicians worry about infections and other problems in children who receive regular blood transfusions.

"We have done two studies now involving transfusions, and fortunately, we have not had any serious consequences in the short term: no infections, no serious complications," said Dr. Robert J. Adams, MCG neurologist and stroke specialist.

The main consequence they have seen is iron overload, which left untreated can seriously damage the heart, liver and other organs.

"If you give one unit of blood, you are giving 250 milligrams of iron," said Dr. Abdullah Kutlar, hematologist/oncologist and director of MCG's Sickle Cell Center. "Considering the fact that in many cases you do this repeatedly, you are adding a significant amount of iron."

The body doesn't have a mechanism to excrete iron. A healthy person typically won't absorb too much, so iron supplements, for example, generally aren't a problem. But patients regularly exposed to large amounts of excess iron can begin to retain more.

The cumulative effect can be significant for sickle cell patients and even worse for people with thalassemia, a condition characterized by dangerously low hemoglobin levels, necessitating transfusions every few weeks, said Dr. Kutlar.

Until very recently, the only treatment for iron overload was a five-night-per-week infusion of the drug desferoxamine under the skin. Desferoxamine binds to iron, changing it into a soluble form that can be excreted by the body. "It's an effective drug, but compliance has been notoriously poor for obvious reasons," said Dr. Kutlar. "Children don't want to take it; even adults don't like the regimen."

In November, the Food and Drug Administration approved a drug that works the same way but

comes in a tablet taken daily dissolved in liquid. MCG participated in phase-two clinical trials of the new chelating agent, deferasirox, for transfusion-related iron overload and last summer began a phase-three trial. But before that trial was complete, the FDA approved its use for transfusion-related iron overload in patients age 2 and older.

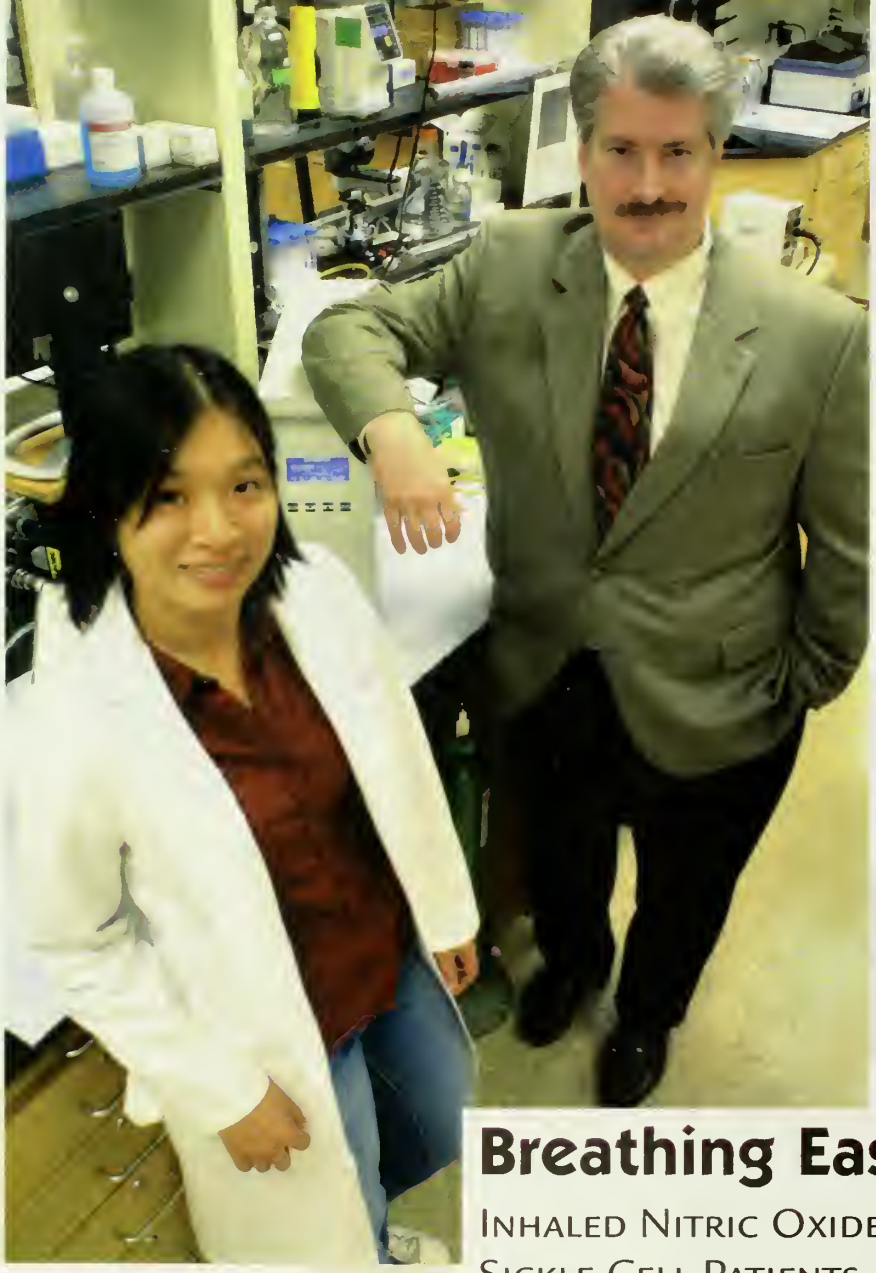
"This takes care of one of the most significant side effects of long-term transfusion," Dr. Kutlar said.

But that's not the end of the story. One of many goals is to further define who gets ongoing transfusions to further reduce the potential for problems such as transfusion-related infections no pill can fix.

Dr. Kutlar is looking at genetic variations in Dr. Adams' study participants for some answers.

"If you had a way to tease out who will revert to low risk and stay there vs. those who will require longer transfusions, that would be a great day," he said.

Toni Baker



Sabina Wang and Dr. C. Alvin Head

Breathing Easier

Inhaled Nitric Oxide May Help Sickle Cell Patients

Inhaling a small dose of nitric oxide gas may one day help sickle cell patients avoid pain crises and live healthier lives, researchers say. Nitric oxide may help normalize a sickle cell patient's hemoglobin by restoring the natural charge and shape to the oxygen-carrying component of red blood cells, MCG researchers have found.

"Hemoglobin S plus nitric oxide behaves much like normal adult hemoglobin, which does not sickle," said Dr. C. Alvin Head, chair of the Department of Anesthesiology and Perioperative Medicine.

In fact, their test-tube studies of human hemoglobin show nitric oxide not only prevents unhealthy clustering of hemoglobin S molecules but can melt existing polymers, leaving more hemoglobin free to do its job of oxygen delivery to the body.

Low concentrations of the short-acting gas, which is found naturally on hemoglobin, reach red blood cells when inhaled, essentially turning the lungs into a hemoglobin repair shop.

Sabina Wang, an MCG research associate who performed the studies, presented the findings

during the American Society of Anesthesiologists' annual meeting in Atlanta last October.
Dr. Steffen Meiler, vice chair of research in the Department of Anesthesiology and Perioperative Medicine, also was a contributing co-author.

"This is clearly a novel idea," Dr. Head said of findings that extra nitric oxide normalizes the neutral charge of hemoglobin S to a slightly negative charge. It might also help prevent development of unwanted hemoglobin S polymers in the microcirculation when oxygen levels are lower, once hemoglobin releases its oxygen to the tissues.

Those surface irregularities create puzzle pieces that help hemoglobin S molecules fit together to form the polymer. The neutral charge permits this abnormal bonding that eventually deforms the red blood cells that carry them. "As the polymer gets longer, it binds to the red cell membrane and begins to deform the cell. If you can prevent this from occurring, you won't get the abnormal-shaped cells [or the resulting pain crises]," he said.

The negative charge helps hemoglobin molecules repel each other and stay independent, round and functional. Oxygen also can break apart dangerous polymers, but the smaller nitric oxide is more agile, has a higher affinity for hemoglobin and—perhaps most importantly—can normalize the charge of hemoglobin S, Ms. Wang noted.

Low doses of nitric oxide already are used for conditions including hypoxic respiratory failure in newborns.

"We knew that nitric oxide would bind to hemoglobin very, very rapidly," said Dr. Head. "In fact, that is the basis of why when you inhale it in very low concentrations, you do not get systemic vascular effects. It rapidly crosses the lungs, binds to the hemoglobin, then circulates in the blood."

"This is not a cure, but we think it will get patients out of a crisis earlier or maybe prevent a crisis."
– Dr. C. Alvin Head

It was when he was giving nitric oxide to lung transplant patients years ago, patients who might end up breathing the gas for days or weeks at a time without apparent ill effects, that he first considered how it also might benefit sickle cell patients.

Previously published studies by Dr. Head and his colleagues in a hypoxic animal model for sickle cell disease showed the animals that breathed nitric oxide gas are the ones that survived.

"This is not a cure, but we think it will get patients out of a crisis earlier or maybe prevent a crisis," said Dr. Head of the potential therapy that may one day be used by sickle cells patients like inhalers are used by asthmatics.

The MCG researchers already are working with University of Georgia researchers to crystalize hemoglobin S and identify all points of action for nitric oxide. "We know there is a charge change globally," Dr. Head said, "but we want to identify the exact sites where it's binding and might have its biggest impact." ⊷

Toni Baker

'Like a New Life'

Advances in Sickle Cell Treatment Open Door to Happy Childhoods

It's lunchtime, but Dr. Kathleen M. McKie isn't thinking about her own stomach; she is gently examining the abdomen of 3-year-old Denqualia Roberts.

"Alright, let's listen to you," says Dr. McKie, as she shifts her attention upward to Denqualia's heart. "When her heart starts speeding up, it's a good sign that her blood count is dropping," she tells mom, Demetria Roberts. "Her blood count is probably really good right now. You sound good; yes, you do," she tells her patient.

Denqualia and her mom are both doing well, much better than the week before, when the child complained of leg pain and was uncharacteristically lethargic. The pediatric sickle cell clinic was closed by the time Ms. Roberts and her youngest child arrived in Augusta from Tennille, Ga. So they went to the MCG Children's Medical Center emergency room where doctors told Ms. Roberts the trip to Augusta was a good decision.

Denqualia, who has sickle cell disease, had essentially stopped making new red blood cells and her body, specifically her legs at the moment, were calling out in pain. She was admitted to intensive care and given a transfusion to help replenish her red blood cell supply.

"When you quit making them and keep breaking them, you get into a negative balance, like a bank account," says Dr. McKie, a pediatrician who has treated children with sickle cell disease since 1982.

Her partner in life and work, Dr. Virgil C. McKie, retired chief of the Section of Pediatric Hematology/Oncology, still helps her take care of children such as Denqualia in the Augusta clinic. He also travels to satellite clinics in the Georgia cities of Valdosta,

Waycross, Albany and Dublin, so families don't always have to come to Augusta.

MCG and the McKies begin their relationship early with children with sickle cell disease. As soon as standard newborn tests detect the disease in any Georgia county except those contiguous with Atlanta, Dr. Kathleen McKie gets a report and contacts the baby's local health department and primary care provider. After confirmation testing at MCG's Titus H. J. Huisman Hemoglobinopathy Laboratory, Dr. McKie calls back to connect the child and family to a pediatric sickle cell site.

"The most important visit is the first visit," says Dr. McKie. "You have a fine line between scaring people to death about this beautiful new baby they have and making them respectful—but not afraid—of this disease. I tell parents their babies couldn't have been born at a better time and place because of everything that is available to them to intervene. There have been so many research advances, many of them happening right here in our own hometown."

MCG research first identified a way to detect children with sickle cell disease who are at risk for a stroke, then showed that monthly blood transfusions reduce that risk by 90 percent.

Dr. Kathleen M. McKie examines Denqualia while mother Demetria Roberts looks on.

"I tell parents their babies couldn't have been born at a better time and place because of everything that is available to them to intervene. There have been so many research advances, many of them happening right here in our own hometown."

–Dr. Kathleen M. McKie

Today, all MCG sickle cell patients are offered transcranial Doppler screenings beginning as early as possible to determine if they are among the 10 percent at risk. "We do the TCDs as soon as we can get the child to be cooperative," says Dr. McKie. Children have to lie still while technologists use painless ultrasound to measure blood flow rates in the brain; higher speeds indicate a narrowing passage and a potential stroke site. The youngest stroke patient Dr. McKie has seen was 2.

When an abnormality turns up, she brings up transfusions. "Transfusions are fraught with complication potential, so we don't do it on a chronic basis lightly. But when you know it will prevent a first-time stroke, I think I could make that commitment."

Dr. McKie makes that personal determination before approaching parents about any treatment. Hydroxyurea, approved by the Food and Drug Administration in 1998 as the first treatment for adults with sickle cell disease, also is making a huge difference in the quality of children's lives by increasing levels of fetal hemoglobin and preventing red cells from taking the distinctive sickle shape that wreaks havoc on their blood vessels.

The drug reduces incidents of adult hospitalization by 50 percent and helps avoid some of the disease's most devastating consequences, such as organ damage, pain episodes and acute chest syndrome. Its potential in stroke reduction is just beginning to be evaluated.

"Oh my goodness, if a child is not doing well and we put them on Hydroxyurea, it's like a new life," Dr. McKie says. "They eat well, they play well, they grow better, they have new energy, they see themselves as well. It's not the end-all answer, but, boy, is it wonderful."

Even though it has not been approved specifically for children, practitioners started using the drug almost immediately in teens with sickle cell disease and now use it in babies with serious disease. "We don't know the long-term complications of Hydroxyurea, but we know what sickle cell disease will do if we don't do something," says Dr. McKie. "When I use the drug, I use it thinking if my child had this, I would use it. If it doesn't fit that criterion, I don't offer it."

Some sickle cell patients, such as Denqualia, are fortunate in having largely active, happy lives despite their disease. The only medicine she takes regularly is an antibiotic to forestall infections. The blood transfusion she had the week before was her first.

Most of the time, she is an active little girl, picking on her three older siblings, who do not have the disease, and telling her mom when she thinks they have been bad. "As long as she is fine, I am fine," says Ms. Roberts. ⇔

Toni Baker

Minimal Disruption,

Surgical Techniques Put Surgeons on Cutting Edge

It would probably take longer for Robbie McClam to renew his driver's license than it did to have his overactive parathyroid gland removed. "Minimally disruptive" is how he characterizes the surgery he had in 2004 at MCG Medical Center by surgeon Dr. David Terris, a specialist in thyroid and parathyroid disease. "Minimally invasive" is the technical term. Maximal satisfaction is generally the result.

"I was amazed at how quickly I recovered from the surgery," said the Columbia, S.C., architect. "I was comfortable and at ease with minimal pain. I had the surgery in the morning, and by noon, I was on the road heading back to Columbia. I was on the job site the next day."

In recent years, MCG Health System surgeons have developed and refined ever-expanding applications for minimally invasive procedures, resulting in shorter operative times, quicker recovery periods, less blood loss, minimal scarring and less pain.

"When I think about surgery today, I am reminded of the classic car commercials that said: 'This isn't your father's Oldsmobile.' Along those same lines, this isn't your father's OR," said Dr. Terris, Porubsky Distinguished Professor and chair of the Department of Otolarnygology-Head and Neck Surgery.

Dr. David Terris

Peep-Hole Surgery

Laparoscopic surgical procedures are minimally invasive techniques in which surgeons insert long, slim instruments into the body through dime-sized slits. A laparoscope is inserted to allow surgeons to see inside the body via a television monitor. A similar procedure is hand-assisted laparoscopy, using an incision large enough for the surgeon to insert his hand during surgery.

For years, these techniques have been used for certain surgeries such as abdominal or thyroid, but now are being used to treat urologic cancers, to perform hysterectomies and even to transplant kidneys.

"These are actually quite elegant procedures that usher in a new era of cancer management in our state," said Dr. James Brown, an MCG Health System urologist who was one of the first in the state to perform laparoscopic prostate and kidney cancer surgery beginning in 2003.

"Academic medical centers across the country are moving toward this procedure as the norm," said Dr. Sean Francis, director of urogynecology and the first physician in the Augusta area to offer laparoscopic hysterectomy in 2005. "We are doing everything we can to avoid opening the abdominal area. With the laparoscopic procedure, the largest scar is one centimeter in length while traditional abdominal incisions can be as long as 15 centimeters." But cosmetic concerns aren't the only consideration. "At least 25 percent less blood is lost during surgery using this technique."

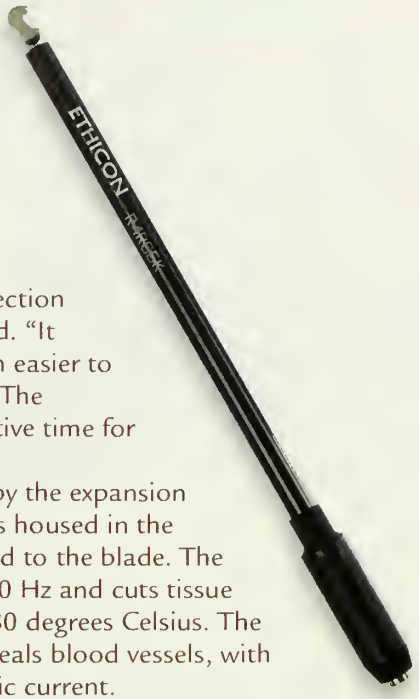
Maximal Satisfaction

Dr. Christine Gourin

Recovery Hums Along

In 2003, head and neck surgeon Dr. Christine Gourin pioneered a technique using a harmonic scalpel to remove tumors of the parotid gland. "The harmonic scalpel is just as safe as conventional surgical methods and is uniquely suited to surgeries where protection of nerve function is important," she said. "It results in less blood loss, making it even easier to identify the facial nerve during surgery. The harmonic scalpel greatly reduces operative time for the patient."

Ultrasonic vibrations are produced by the expansion and contraction of piezoelectric crystals housed in the hand piece of the scalpel and transferred to the blade. The scalpel vibrates at a frequency of 55,000 Hz and cuts tissue bonds at temperatures between 60 to 80 degrees Celsius. The scalpel simultaneously cuts tissue and seals blood vessels, with low thermal transduction and no electric current.



In 2004, MCG otolaryngologists and neurosurgeons teamed to endoscopically remove benign tumors of the pituitary gland. In endoscopic procedures, a tool is inserted through the nose, straight through the sinus area and into the pituitary gland. "This new approach has significant benefits for patients," said Dr. Stil Kountakis, director of rhinology/sinus surgery. "Patients who have this procedure experience less pain and a quicker recovery. And there is minimal trauma to the nose."

Dr. Stil Kountakis

"We have the expertise to perform this procedure as well as the technology," said neurosurgeon Dr. John Vender. "We use a specialized, powered endoscope holder that steadies the instrument with pinpoint precision, leaving the surgeon's hands free to perform other aspects of the surgery. We also have a computer image-guided system to precisely localize the area where surgery is performed while preserving other structures."

"Because of the patient-friendly nature of this procedure, there is a demand for it," said neurosurgeon Dr. Dion Macomson. "Patients are shopping for it."

Sophisticated Pediatric Care

The MCG Children's Medical Center recently opened a new high-tech endosuite as part of the new Center for Minimally Invasive Surgery for Children.

"Minimally invasive surgery has become the standard of care for many thoracic and abdominal operations in children," said Dr. Walt Pipkin, the center's director. "As in adults, this technique allows children to heal faster with less pain, less scarring and less risk of infection. Parents and their children are able to get back to their lives more quickly."

All equipment in the endosuite is ceiling-mounted and computer-controlled, including lights, cameras and insufflators. Specialized equipment includes tiny telescopes used to view the inside of the abdomen and chest that are connected to monitors, enabling surgeons to see interior structures at a larger and clearer size. No matter where the surgeons look, the number and orientation of the monitors give them a comfortable view to guide them easily and safely during surgery.

"We continually try to find new and different methods, technologies and treatments to achieve better outcomes for our patients," Dr. Pipkin said.

Deborah Humphrey

A displaced family in Pakistan (photos provided)

'Please, Just Come'

Physician Organizes Trip to Pakistan to Treat Earthquake Victims

Dr. Haroon Choudhri (also pictured at top right) performs surgery in crudely equipped Pakistan hospital

Pakistan. Oct. 8, 2005. A normal day turned into chaos when a 7.6-magnitude earthquake struck. In a matter of moments, walls toppled, buildings caved in and cities became little more than gravel. In the aftermath, the only sounds were the screams and sobs from the injured and dying.

Thousands of miles away, Dr. Haroon Choudhri heard that call. "There was no question in my mind that I needed to do something, not just talk to people, not just send money. I had to be there. I had to help," said Dr. Choudhri, section chief of adult neurosurgery at MCG Health System.

In the days following the quake, Dr. Choudhri opened dozens of e-mails from colleagues in that part of the world, begging for his help and experience. Many of the e-mails included photos of patients whose bodies had been crushed by the falling buildings and other debris. Countless patients were children, trapped in their schools when the earthquake happened. "It's impossible to describe the feelings that go through you when you're a father yourself and you see images like this," said Dr. Choudhri.

Dr. Choudhri immediately made plans for an extensive medical mission to Pakistan that would include physicians, support staff and the equipment and tools the area so desperately needed. His timeline: To be in Pakistan by January 2006. But the need was overwhelming. The e-mails continued, becoming even more urgent and pleading. "Please, just come. Come now. Bring your bare hands, but just come."

With little more than a week to prepare, Dr. Choudhri scrambled to develop a plan to meet the immediate demands of the devastated region. His first actions involved helping to guide the massive medical care that would

have to be provided, directing physicians there to turn major cities into triage centers. He sent funds ahead of him to help support rescue and recovery efforts.

Dr. Choudhri's father, also a neurosurgeon, happened to be in Lahore, Pakistan, on the day of the quake. Uninjured, he decided to remain in Lahore to help his son schedule patients and surgeries for his visit. Dr. Choudhri soon recruited his brother, Dr. Asim Choudhri, a radiology resident from Virginia; Dr. Lance Perling, a neurosurgery spine fellow at MCG; and Bill Loftus of the Stryker Corp. Both MCG and Stryker, a maker of surgical instruments and supplies, generously donated equipment and supplies to the cause. Dr. Choudhri paid the lodging and travel expenses of all members of his team.

The team left Augusta Oct. 21 for their 10-day mission, traveling first to Lahore, then to Abbottabad, a city near the epicenter of the quake. Lahore, a city of about 10 million, was receiving a flood of victims from overwhelmed hospitals close to the epicenter. The most complex cases, those beyond the expertise of local surgeons, were waiting.

"We were prepared to do as many surgeries as we could, but the surgeons there said, 'No. Let us do those. We know how to do those. Help us with those that we don't know how to do. Teach us so that we can help more people when you are gone,'" explained Dr. Choudhri. "We were just a small team and the surgeries we could have performed would only have helped a few people. By teaching them how to do these procedures, we were able to help many, many more."

One of these complex cases involved a mother who was injured while trying to save her infant when their home collapsed. Her fractured vertebrae caused pain and paralysis. "I needed a particular implant called a vertical distraction cage, which is a piece of metal that bears the weight of the damaged spinal column. Unfortunately, it was not something we had brought with us," said Dr. Choudhri. "The surgeons there said, 'Go ahead with the surgery; we will get you what you need.' It was amazing, but they brought me an implant that they had made, and it worked perfectly. I was able to enter through the flank, place the implant and fill it with bone fragments. I have since learned that this patient is doing very well and is expected to walk again."

Other surgeries focused on previously treated victims. "One patient was a man who had anterior surgery to his cervical spine. Unfortunately, the available instrumentation was of poor quality and resulted in further damage to his spinal cord. I revised this by removing the screws that had been placed into the spinal cord and reconstructing the spine with a new plate and screws. I recently heard by e-mail that he is regaining strength in his arms and legs as well as increased sensation. There is a chance for significant recovery."

The complex cases were made even more difficult by the bare-bones condition of the hospitals. "It was very different from a place like MCG where you have support staff ready, and all the most advanced equipment and tools for any contingency," said Dr. Choudhri. "The supplies we brought were wonderful, but the needs of the region were so much greater."

At press time, Dr. Choudhri and his team were set to return to Lahore and other devastated areas. While many of the earthquake victims have received care, many still remain, and the need continues for more education on surgery skills. "We plan to help however we can, wherever they need us," said Dr. Choudhri.

His thoughts return again and again to the people he met there. Looking back through hundreds of photos, he points to a little girl who lost her foot when her school collapsed, yet who couldn't stop smiling. Despite the devastation of the region and overwhelming physical and emotional pain, the beauty and grace of the area and the people were still evident. "I've been very blessed in my life," said Dr. Choudhri, glancing at the photo of his baby daughter on his desk. "This was just something I really wanted to do." ➸

Danielle Wong Moores

PAKISTANIS WALK PAST RUBBLE.

Lt. Cmdr. Rich Jadick

V for Valor

Dr. Jadick's heroism was featured on the cover of the March 20 edition of Newsweek.

MCG Resident Receives Bronze Star for Heroism in Iraq

Serving in Iraq was the most frightening experience of Lt. Cmdr. Rich Jadick's life. But fear didn't stop him from saving the lives of more than 90 critically wounded Marines, sailors and Iraqi soldiers in the line of fire.

"The fear factor of getting killed gets overwhelmed by the fear factor of failure."
–Lt. Cmdr. Rich Jadick

On Jan. 30, Dr. Jadick traveled to Camp Lejeune, N.C., to receive one of the Marine Corps' most prestigious awards, a Bronze Star with a Combat 'V' for Valor, for his actions during Operation al-Fajr (Arabic for dawn) in Fallujah, Iraq. The U.S. military dubbed the November 2004 operation "some of the heaviest urban combat Marines have been involved in since Hue City in Vietnam in 1968."

As the lead medical officer traveling with the 1st Battalion, 8th Marine Regiment, Dr. Jadick led a team into the heart of Fallujah to ensure resuscitative medicine was available for all Marines in the battalion's battle space. He credits the actions of his 54 corpsmen with making their venture into one of the last Iraqi strongholds a success.

"The award is obviously a team-driven award – I was just a part of a group of people that did a lot of good things," he said.

Lt. Col. Mark Winn, the unit's battalion executive officer during the operation, nominated Dr. Jadick for the award. "Normally, a battalion surgeon just offers medical treatment. But Rich is a former Marine officer, so he was not only a doctor, he was a leader," he said. "In my 17 years in the service, through the Gulf War and then Iraq, I've never seen a doctor get a Bronze Star. He is more than deserving of it."

His heroism included traveling into the city with armored ambulances to stabilize a sailor with a sucking chest wound—a wound allowing air to pass in and out with each breath. He braved rocket-propelled grenades and small-arms fire to reach the sailor and provide lifesaving treatment.

Hours later, his team received an urgent evacuation request from a nearby unit under heavy fire. He moved his team to a casualty collection point in the city, where he provided trauma care to seven soldiers.

"I can't even define scared; my legs wanted to turn around. It was a conscious effort, a mental effort to say, 'Whoa, alright, keep moving and do what you need to do.'"

As they began to move the wounded to the ambulance, a rocket-propelled grenade careened off the ambulance and another bounced off the wall directly in front of the ambulance. Despite the danger, Dr. Jadick stood on the open hatch of the ambulance until they collected the wounded men. Six of the seven survived.

Fighting in Fallujah intensified as the day progressed. Dr. Jadick, the only physician in the city, formulated a plan to most effectively reach the growing number of U.S. casualties. Most doctors operate field hospitals in a safe area several miles from the battlefield, but Dr. Jadick feared the critically wounded might not survive the trip.

"Rich said that would be too late," Lt. Col. Winn said. "He convinced me it was the right thing to do."

Though the U.S. military had not gained a strong foothold in the city, his corpsmen moved into the government complex and set up a casualty collection point. Surrounded by insurgents and snipers, his team managed to secure a small prayer room in which to treat patients.

His corpsmen saw more than 90 combat casualties during an 11-day period, 60 within the first three days of arriving at the government complex. In addition to the U.S. casualties, Dr. Jadick treated countless Iraqis and civilians with no other means of medical support. He credits his young corpsmen with making the effort possible.

"I can't give these guys enough credit," he said. "These are kids who didn't know anything about medicine. Some had never seen blood before, but here they were amputating legs.

"We were so tired, and we just kept getting casualty numbers," he said. "We'd take care of eight, and 12 more would show up. We worked a lot of hours and they learned how to do a lot of things really quickly."

Despite the exhaustion, Dr. Jadick was impressed by his corpsmen's resilience. "At the end of the day, attitudes were always pretty high," he remarked. "These guys never flinched—none of them."

Though Dr. Jadick considers the award a high honor for his unit, he also values the recognition his corpsmen received from the Marines, sailors and soldiers they served.

"The ultimate reward is when, for whatever stroke of luck, the guy you're working on lives," he said. "Later, you see them talking to your corpsmen and they say, 'Hey, you guys saved my life.'"

Two months following the battle of Fallujah, Dr. Jadick returned to the United States with his unit intact. The homecoming was sweet for the 54 corpsmen, but particularly for Dr. Jadick: He was finally able to meet his baby daughter, born just two days before he left for Iraq.

"That was the killer, seeing my daughter for the first time," he said.

Dr. Jadick will remain on active duty throughout his four-year residency at MCG. Though he should avoid deployment until at least 2009, he isn't hesitant about his future in the U.S. military. "I'll see what they do with me next," he said. "Serving with those guys is an honor. I'd go again if they needed me." ⊶

Kim Miller

A Perfect Mix

Oral Surgeon Helps Future Generations Bone Up on Implants

Health care was a way of life for Solon Kao long before people started calling him "doctor." Growing up in Taiwan as the son of two physicians left little doubt as to what he would do with his life.

"Both of my parents are pediatricians," says Dr. Kao, a new faculty member in the School of Dentistry. "All I've ever known is health care."

But he admits that his life's path wasn't always clear. He studied biomedical engineering at Vanderbilt University only to avoid the foreign-language requirement of a liberal arts degree.

"I already knew a foreign language," laughs Dr. Kao, who moved to the United States with his family as a teen.

It was at his next destination—the University of Tennessee School of Dentistry—that Dr. Kao discovered a love for oral surgery. "I think it was the scope of practice that attracted me to surgery," he says. "In this field, you get to see the fruits of what you do. Something is broken and you get to put it back together—to make something happen. Failure is not an option."

A residency in oral and maxillofacial surgery at Louisiana State University further cemented his love for the field and for the southeastern United States. In 2002, he began an oral surgery residency at MCG.

"I've always been comfortable in the Southeast," Dr. Kao says. "I didn't really know of Augusta then, but I knew I wanted to stay in this area."

During his MCG residency, he began tutoring dental students in his spare time and found that he loved it. "When I was a student, I remember having awful teachers," he says. "They always made things so complicated. All I needed them to do was to interpret complicated concepts in a simple way."

He promptly chose academia as a career path so could combine dentistry with teaching and research.

"At first, I was just helping students, and then I got to make several presentations about topics I was studying," Dr. Kao says. "There's just something about making a presentation. The people listening think that you are the expert and you just feel good."

All of his hard work paid off. Dr. Kao joined the School of Dentistry faculty as an assistant professor of oral and maxillofacial surgery after finishing his residency. His new job is a perfect mix, he says, allowing him to practice oral and maxillofacial surgery and teach at the same time.

Dr. Kao also offers a special service to MCG dental patients. He is the only dentist at MCG and one of the few in the area practicing a technique—alveolar distraction osteogenesis—that helps new bone grow in the gums. Using a patient's own bone as a foundation helps stabilize an implant, he says.

Used mostly in trauma patients, distraction osteogenesis uses an elevator-like device placed in the gums where bone has been lost. There must be enough existing bone to secure the device.

A portion of the appliance is left outside the gums and the patient turns it so many rotations per day, which raises the top portion of the appliance and leaves a space between it and existing bone. The procedure creates an artificial trauma in the existing bone and forces it to heal itself by regeneration. The additional bone provides a large enough base for dental implants.

This procedure, still relatively new to the field, also allows dentists to better estimate timelines for recovery.

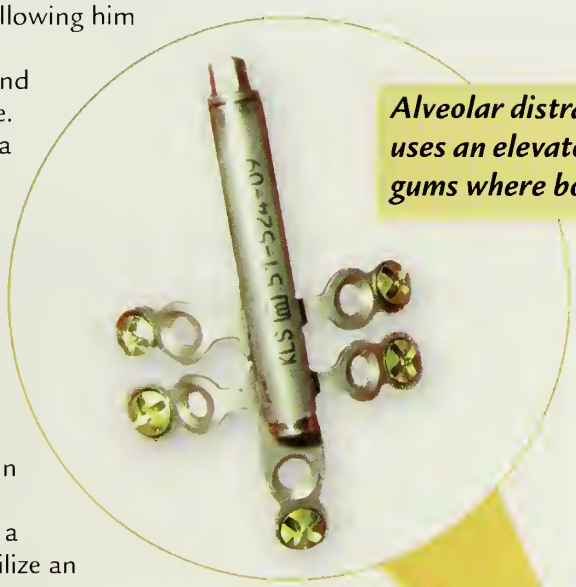
"The timing is more predictable because I know when a patient has turned the appliance for so long, there is enough bone there to put the implant in," Dr. Kao says. "It also allows me to do the procedure in the office instead of going to the operating room to take a bone graft from a patient's skull, jaw or hip."

Because there is only one surgical site, the procedure is often less painful than a bone graft, he says.

Outside of providing patients with a better prognosis after oral surgery, Dr. Kao enjoys a wide variety of things. His hobbies include customizing car stereos, windsurfing and playing classical piano. One of his performances was featured on National Public Radio. But teaching provides his greatest satisfaction.

"The positive feedback I get from students makes this job great," he says. ⊷

Jennifer Hilliard



Alveolar distraction osteogenesis uses an elevator-like device placed in the gums where bone has been lost

A Group Effort

'Sisterhood' Breathes Life Into Smoking-Cessation Program

Mickie Tubman can still recall her excitement last April. Having quit smoking only one week before, she was trekking up a small incline when she suddenly realized something: She could breathe.

"I felt like I had just climbed Mount Rushmore," Ms. Tubman said.

On a recent afternoon in January, Ms. Tubman gathered with five women who also quit smoking last spring with the help of Sister to Sister, a community-based Medical College of Georgia program to help women in public housing kick the habit.

They were there for many reasons—to provide suggestions on improving the program, to update each other on their progress, but most of all, to thank MCG faculty for helping them regain control of their lives.

"I am just so grateful," Ms. Tubman said.

The program was initiated six years ago by Dr. Jeanette Andrews, assistant professor of nursing, when a Richmond County school counselor asked her to help school staff and parents quit smoking. Community focus groups helped researchers glean how prevalent smoking was in public housing, how much interest its residents had in quitting and what types of strategies they thought would best help them.

"African-American women in public housing communities reported a smoking prevalence of 40 percent, with at least two-thirds of households having at least one smoker in the residence," Dr. Andrews says.

The focus groups had very clear ideas about how to tackle the problem.

"They preferred community-based group meetings with preferences for family kinships and networks that were nonjudgmental, included spiritual themes and were personalized to meet individual needs," Dr. Andrews said. "The initial advisory group named the approach Sister to Sister not only because women were encouraged to quit along with other female relatives, but the support among women quickly becomes a sisterhood as they collectively strive for the goal of quitting smoking."

The hope was that by involving friends and family members, success rates would skyrocket.

With predoctoral fellowship funding from the National Institutes of Health and additional funding from the American Cancer Society and the American Legacy Foundation, Dr. Andrews began her first trial in 2002 in two public housing neighborhoods – one treatment and one comparison– with 103 African-American women smokers.

In the treatment community, a neighborhood advisory board distributed anti-smoking brochures and placed a message board with monthly anti-smoking messages near the entrance to the community. Women smokers in the treatment neighborhood received nicotine patches in conjunction with nurse-led behavioral treatment, support from African-American neighbors who were former smokers and neighborhood anti-tobacco initiatives.

Small-group sessions were held weekly for six weeks with cessation materials, empowerment counseling and group prayer. Two community health workers attended each meeting and contacted the women weekly to provide additional support.

In the comparison community, women smokers attended weekly nurse-led educational meetings about health topics including hypertension, nutrition, exercise and self-esteem.

In results Dr. Andrews characterized as astonishing, 27.5 percent of women in the treatment neighborhood were smoke-free six months after the program ended. Only 5.7 percent of the comparison group had quit.

"Having the community members involved not only in the planning and implementation of the project, but also in the evaluation, was instrumental to empowering them to strengthen and promote behavioral changes in their communities," Dr. Andrews says.

Today, four years after those first group meetings, 150 women from four public housing neighborhoods are enrolled in Sister to Sister. Stacey Crawford, a lay member of the community and a former smoker, leads group meetings in treatment neighborhoods. Nicotine patches continue to be provided for both the treatment and comparison neighborhoods.

Sister to Sister participants consider the program nothing less than a lifesaver.

"I recently found out that I have to have an operation," Ms. Tubman says. "My doctor told me that if I still smoked, I couldn't have it unless I quit. I'm thankful that's not an issue for me anymore. After being a smoker for 40-plus years and the constant buying of cigarettes, I just don't want to do it anymore. I just know that I'm too good to smoke now, and that was a real group effort." ⊷

Jennifer Hilliard

"The initial advisory group named the approach Sister to Sister not only because women were encouraged to quit along with other female relatives, but the support among women quickly becomes a sisterhood as they collectively strive for the goal of quitting smoking."

– Dr. Jeannette Andrews

WOMEN SUPPORT EACH OTHER'S SMOKING-CESSATION EFFORTS DURING SISTER TO SISTER MEETING.

Clearing the Smokescreen

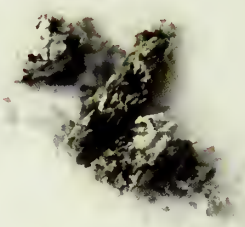
Program Works With Schools and Parents to Prevent Tobacco Use

Martha Tingen is changing kids' perceptions about alcohol, tobacco and drug use—one classroom at a time.

On a recent morning in January in a crowded fourth-grade classroom at Carver Elementary in Wadley, Ga., Dr. Tingen, a nurse researcher at the Georgia Prevention Institute, stood in front of the class and asked children to answer questions about their opinions and perceptions.

"Cigarette smoking can cause your skin to wrinkle. True or false?" she asked.

Smoking is the number-one cause of preventable death in the United States



"Most teens smoke cigarettes. True or false?"

The questions are part of a study that will help determine whether a combination of classroom training and at-home reinforcement is the key to teaching children to make better health decisions.

Third- through fifth-grade students at the rural Georgia elementary school are undergoing LifeSkills training to educate themselves about the harsh effects of tobacco, alcohol and drug use, said Dr. Martha Tingen, the lead researcher on the study. This approach, an evidence-based

Children are three times more likely to start smoking if a parent smokes

intervention program that combines intensive two-day training for teachers and counselors with in-class and at-home exercises for children, is most focused on preventing and stopping tobacco use.

Young students are an important target group because the average age that children begin smoking in Georgia is 13, Dr. Tingen said.

The study, called Project WIN, also targets parental behavior that may affect children. Parents use a specialized version of the LifeSkills training at home to reinforce the interactive content presented in the classroom.

The home approach also encourages parents who smoke to kick the habit. Parents get culturally tailored education about the negative effects of tobacco as well as the effects of secondhand smoke on their children, Dr. Tingen said.

"Smoking is a social and learned behavior," she said. "This study is giving parents and children the tools and opportunities to work together for effective decision-making that fosters and promotes healthy lifestyle choices."

Through a collaborative effort with nursing professor Jeanette Andrews, parents who want to quit smoking are offered the option of the nicotine patch as well as healthy doses of motivation, in person and over the phone, by Dr. Tingen and other project coordinators.

"Smoking is still the number-one cause of preventable death in the United States," Dr. Tingen said. "Children are three times more likely to start smoking if a parent smokes. If the parents quit before the child reaches middle school, the chances of their child initiating smoking decreases substantially. There is also an end to the damaging effects of secondhand smoke exposure on them, which is an important aim of the study as well."

DR. MARTHA TINGEN WORKS WITH SCHOOLCHILDREN.

To impact children's behavior, researchers must focus on intergenerational transmission—the process of children adopting their parents' lifestyle behaviors, she said.

This intervention study should determine whether school-based tobacco prevention programs impact parents and their decision to promote non-smoking.

"Kids think that everyone smokes, but with this intervention, they are provided not only information on how many kids smoke, but also information on how many do not smoke," Dr. Tingen said. "Interactive reinforcement of the classroom content at home equips children with the necessary skills to make better decisions and lifestyle choices. This approach also develops a positive relationship between children and their parents, and research has shown that parents who have good relationships with their children can influence the decisions they make."

In addition to using survey methods, Dr. Tingen and her research team also use biological measures. In the body, nicotine breaks down to cotinine and salivary cotinine—an indicator of secondhand smoke exposure and/or smoking status is measured in the children. Carbon monoxide—an indicator of smoking status – is measured in the parents.

Jennifer Hilliard

Willing and Able

Encouragement and Adaptations Help Nursing Student Overcome Disability

Medical College of Georgia nursing student Kelsey Sullivent Trapp nearly left school her first semester. It would take the encouragement of a stranger more than 2,000 miles away to change her mind.

Due to a congenital birth defect, Ms. Trapp, an Augusta native, was born without her left hand and forearm. Her challenges multiplied at age 3, when her mother died in a car accident. Despite the tragedies, her father and relatives closed ranks to ensure as happy and normal childhood as possible.

Kelsey Sullivent Trapp

Though she tried body and electric-powered prostheses, Ms. Trapp has used a cosmetic arm since middle school. "Until second grade, I used an arm with a metal hook; all the kids thought that was pretty cool," she said. "I tried other things, but realized the cosmetic arm works just as well for me. I can use it to hold things down or wedge things in the fingers."

Though she admits some tasks are difficult, she doesn't consider herself disabled. "I could never jump rope very well," Ms. Trapp said with a smile. "But I can't think of much else I can't do. I just figure out my own way of doing things—either one-handed or with help from my prosthetic arm."

Ms. Trapp received free prosthetics and care at the Shriners Hospital for Children in Greenville, S.C., throughout her childhood. Her experience showed her that despite her obstacles, she was not so different from her peers.

"Everyone there has something wrong," she said. "I saw people who were wheelchair-bound with no arms or legs. I realized that missing part of an arm really wasn't a big deal."

Just three years ago, Ms. Trapp's last trip to the Shriners Hospital inspired her to pursue a nursing career. "I had thought about being a veterinarian but thought the surgical skills would require two hands," she said. "Then I noticed a nurse at the hospital who had the same thing as I did. I thought if she was capable, then so was I."

After completing her prerequisites, Kelsey applied to the MCG School of Nursing. When she was accepted, she was eager to take on the new challenge.

"I put [my physical condition] in my admissions essay so they would know," Ms. Trapp said. "They let me in, so I was confident in my ability to succeed."

She performed very well until it was time for her first skills test, taking a blood pressure measurement. Ms. Trapp realized she could not perform the skill as it had been taught. When the faculty learned of her setback, they were forced to re-evaluate her ability to perform certain skills.

"Initially, we were concerned with the safety of the patient," said Corliss Derrick, instructor of undergraduate studies. "We worried about her ability to maintain sterility while performing certain skills

www.exceptionalnurse.com

one-handed. You don't want to give someone false hope if you're not sure they can do it."

Ms. Trapp researched nurses with disabilities through the Internet. She discovered www.exceptionalnurse.com and the story of Susan Fleming, a nurse in Spokane, Wash., who was born without a left hand. Ms. Fleming was rejected by the first nursing school she applied to, but was later accepted at a different school. She now has 20 years' experience of as a registered nurse and received the 2004 Cherokee Inspired Comfort Award for registered nurses. She can draw blood, start IVs, work in labor and delivery and work in the operating room during Caesarean sections.

"I got this huge feeling of relief," Ms. Trapp said. "I think I cried when I read her story."

She e-mailed Ms. Fleming that night and got a call from her the next day. She was very supportive, offering encouragement and advice on how to perform nursing skills with one hand.

"I went back to school the next day with her articles in my book bag," Ms. Trapp said. "It gave me the power to say [to myself], 'You can do this. Obviously, if she did it, then you can, too."

She shared Ms. Fleming's story with Steve Whitney, the coordinator of her summer class. Mr. Whitney called Ms. Fleming and they spoke for nearly two hours.

"Talking to Susan opened my eyes," Mr. Whitney said. "I realized that Kelsey could do very well in our program. She just needed extra time to learn her own way to perform the skills."

The School of Nursing faculty was encouraged by Ms. Trapp's continued progress, and realized that with support from teaching assistants, she could succeed on her own merit.

"Kelsey is a very determined, positive young lady," Ms. Derrick said. "She worked very hard, and by the end of the first session, she could perform all the same skills as her peers."

Carla Allen, the teaching assistant assigned to Ms. Trapp's group, spent many hours one on one helping her learn the required skills, including starting intravenous catheters and inserting urinary catheters.

"The first real thing we had a problem with was suctioning," Ms. Allen said. "Kelsey just looked at me and told me she couldn't do it. I told her if we had to stay all night, we were going to work through this." Normally, the procedure requires using one sterile hand to insert a tube down the nose and into the throat. The other hand must be available to vacuum out secretions, using the thumb to suction.

"Kelsey didn't have the use of her other thumb, so we devised a way where she could use her prosthetic arm to suction instead, being very careful not to contaminate," Ms. Allen said.

Throughout the semester, the teaching assistants brainstormed about how to perform different tasks. They practiced on dummies and themselves, discovering what limitations Kelsey faced and how they could overcome them.

"We were determined to find strategies that would work for Kelsey," Ms. Allen said. "We showed her our ideas and she adapted her own way. It helped that she had Susan Fleming to guide her." Ms. Allen credits Kelsey with inspiring her to teach nursing someday.

"She has honestly taught me more than anyone else ever has," Ms. Allen said. "Working with her showed me that I could do this teaching thing. She gave me that little boost of confidence."

Ms. Trapp is now eager to gain more experience and take on new challenges. She is currently gaining clinical experience at MCG Medical Center.

"When I started nursing school, I thought starting an IV would be the hardest thing," Ms. Trapp said. "I did it yesterday for the first time; it came naturally to me."

Ms. Fleming continues to be an inspiration to Ms. Trapp, who was especially heartened by these words of encouragement:

"Kelsey, the biggest disabilities I have seen in nursing aren't physical. They are character flaws that we all can possess, such as laziness, arrogance, failure to react and sloppiness. Don't give up." ⇨

Kim Miller

Innovation in

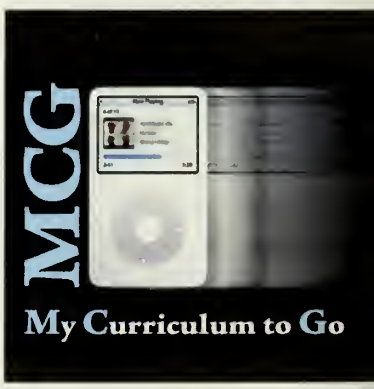
Technology Puts Information in Palms of Students' Hands

E-mail. Instant-messaging. Cell phones. iPods. Today's students want information and communication on demand.

One of a university's biggest challenges is meeting the expectations of this Net Gen, said Clare Billman, director of the Medical College of Georgia Division of Visual and Instructional Design, and she doesn't take the challenge lightly.

"We're aware that our students learn differently from any other generation before them," Mrs. Billman said. "We want them to know we're aware and we're doing something about it."

MCG is developing "My Curriculum to Go," a pilot project to facilitate the learning preference of the new generation. Through a MyMCG Web page, students will be able to download educational video tutorials corresponding to classroom lectures. They will be available any time, anywhere in a variety of formats to accommodate an iPod, palm pilot, cell phone and/or personal computer.



"We're aware that our students learn differently from any other generation before them. We want them to know we're aware and we're doing something about it."

– Clare Billman

"A concerned student told me he'd only seen suturing one time," Mrs. Billman said. "With this technology, he can review it over and over again until he feels familiar with the procedure."

The pilot will be designed primarily for first-year

MCG students and will include content such as medical equipment use, basic anatomy and basic skills.

"This would definitely be beneficial for review of certain topics," said first-year medical student Farzad Masroor. "I don't think I'd use it to study the night before a test, but maybe when I'm reviewing complicated lecture notes or just standing in line somewhere."

A team of instructional designers and faculty from all five schools will seek comments and suggestions from additional faculty members and students. The team will incorporate the feedback and produce the learning content. After peer review, the copyright-free material will be available free to everyone at MCG.

"We're going to be able to take this project to students and faculty and show them examples of what we're trying to do," explained Dr. Carol Nichols, a "My Curriculum to Go" team member and assistant professor of cellular biology and anatomy. "We'll get ideas from students about what will go well in this format and approach faculty members for their participation."

CLARE BILLMAN DEMONSTRATES "MY CURRICULUM TO GO" TO STUDENTS RHONDA TABB (FROM LEFT), KANDYCE J. MACK AND JEFF RAUSCH.

"My Curriculum to Go" incorporates extensive research on the unique learning preferences. Research shows that although traditional college students still prefer the classroom setting, thousands of Internet hours have changed the way they learn. "We are in competition for our students' attention," Mrs. Billman said. "They are a generation of multi-taskers, moving from one activity to the next, and as educators, we must adapt to their learning styles."

The "My Curriculum to Go" tutorials last from seven seconds to seven minutes. Ms. Billman anticipates that students will review the videos during short breaks throughout the day.

"They can pull their iPod or Palm out while waiting in line at the grocery store," she said. "It's a learning tool they can use on their own time, in their own space. It's a very convenient technology that has multiple applications."

The project is expected to expand beyond introductory classes after the first year. As for the next five to 10 years, the Division of Visual and Instructional Design will continue to adapt technological advances to meet the needs of MCG students.

"We want to look at what students do on their own and move into that space," Mrs. Billman said. "In three years, it might not be an iPod—it could be something totally different. Our goal is to put learning in the student's comfort zone without moving out of the instructor's comfort zone." ⊶

Kim Miller

Homecoming Honorees

MCG to Honor Distinguished Alumni

The Medical College of Georgia's five alumni associations will present awards during the university's April 27-30 homecoming celebration.

Allied Health Sciences

The School of Allied Health Sciences Alumni Association will present its Distinguished Alumnus Award to **Claudia Morin**. In addition to her private practice in Augusta, CTM Occupational Therapy, she is founder and director of Blue Ribbon Riders, a therapeutic horseback-riding program for children with special needs. Ms. Morin, who earned her bachelor's degree in occupational therapy from MCG in 1981, is part-time faculty at Western Michigan University in Kalamazoo, Mich., and has served as manager of occupational therapy of MCG Hospital and Clinics.

Ms. Morin received the 1998 Georgia Volunteer of the Year Award from the North American Riding for the Handicapped Association and the 1995 Past President Service Award from the American Hippotherapy Association. She is member of the American Occupational Therapy Association, North American Riding for the Handicapped Association and American Hippotherapy Certification Board.

Dentistry

The School of Dentistry Alumni Association will present its Distinguished Alumnus Award to **Dr. Matthew McRae Jr.**, an Athens, Ga., dentist. Dr. McRae has been in private practice since earning his dental degree from MCG in 1973. He devotes many hours providing dentistry to the indigent in northeast Georgia and co-founded MCG's McRae-Orrington Dental Scholarship.

Dr. McRae has served as MCG clinical faculty since 1988. He is a board member and membership chair of the Academy of General Dentistry and past president and membership chair of the Georgia Dental Society. He is a member of Omega Psi Phi Fraternity and has been appointed to various state health boards by Georgia Govs. Zell Miller and Roy Barnes.

Graduate Studies

Dr. Richard Sowell, professor of nursing and dean of WellStar College of Health and Human Services at Kennesaw State University, will receive the School of Graduate Studies Alumni Association's Distinguished Alumnus Award. Dr. Sowell, who earned master's and doctoral degrees from MCG in 1983 and 1990 respectively, previously served on the faculties of the University of South Carolina, Clayton State College and MCG.

Dr. Sowell received the 2002 Lifetime Achievement Award from the Association of Nurses in AIDS Care, a certificate of merit from the Friends of the National Institute of Nursing Research in 2000, the 2000 USC Educational Foundation Research Award for Health Sciences and MCG's 1995 Phoebe Kandel Rohrer Founders Award for Outstanding Research and Education.

Medicine

The Alumni Association of the School of Medicine will present its Distinguished Alumnus Award for Loyalty to **Dr. William Collins** and its Distinguished Alumnus Award for Professional Achievement to **Dr. Jerome Siegel**.

Dr. Collins graduated from MCG in 1962 and worked at Northside Hospital in Atlanta as an orthopedic surgeon. He is a past president of the Alumni Association of the School of Medicine, MCG Foundation Board of Directors, Medical Association of Georgia and Medical Association of Atlanta. He is a Founder's Level member of the MCG President's Club and served on the American Academy of Orthopedics Research Committee.

Dr. Siegel earned his medical degree from MCG in 1960 and completed a research fellowship in gastroenterology and liver diseases at the Royal Free Hospital in London. He has served as clinical professor of medicine at New York's Albert Einstein College of Medicine since 2001 and has practiced gastroenterology-hepatology-gastrointestinal endoscopy in New York City since 1975.

He is a master of the American College of Gastroenterology and governor of the college representing Manhattan. He was recently elected a board member of the American Society for Gastrointestinal Endoscopy Foundation. He was included in Castle Connolly Medical Ltd.'s *America's Top Doctors* publication and Woodward-White's *Best Doctors in America*.

Nursing

The School of Nursing Alumni Association will present its E. Louise Grant Award to **Anita Lee Black** and its Phoebe Kandel Rohrer Award to **Dr. Patricia Christian**.

Ms. Black, who earned a bachelor's degree in nursing from MCG in 1971, is a nurse consultant for Tucker, Everitt, Long, Brewton and Lanier Law Firm. She was previously nursing coordinator for emergency services at MCG Hospital and Clinics.

She is member of the American Nurses Association, American Heart Association, Emergency Nurses Association and American Cancer Society. She helps provide medical and nursing services for special events in Augusta.

Dr. Christian earned her bachelor's and master's degrees from MCG in 1970 and 1972, respectively. She has served as the chief executive officer of John Umstead Hospital in Butner, N.C., since 1993 and a Centers for Medicare and Medicaid Services Nurse Surveyor in Baltimore since 1991. She is an adjunct assistant professor at the University of North Carolina at Chapel Hill School of Nursing and worked as assistant professor at MCG from 1973-78.

She is a member of the American Nurses Association, Sigma Theta Tau, North Carolina Alliance for the Mentally Ill and Harvard Nurses Study. In 1990, she was listed among the "Great 100 Nurses" in North Carolina by the American Nurses Association Certification in Nursing Administration-Advanced. She is a frequent volunteer for special events such as Special Olympics and "Coats for Kids". ⇔

Kim Miller

Dr. and Mrs. Quentin T. Lawson Sr.

'Above All, Show Patients Respect'

Dr. and Mrs. Quentin T. Lawson Sr.

When asked about her most memorable experiences at the Medical College of Georgia, two names spring immediately to Joan Walton Lawson's mind.

The 1959 School of Nursing alumna fondly remembers founding Dean E. Louise Grant and Professor Leilee P. Ault as strong, intelligent and dedicated leaders.

"They helped us to develop our curiosity and knowledge," said Mrs. Lawson. "I don't think I will ever lose my love of nursing until the day I die."

After graduating, her first job paid $325 a month, "and even then it was a low salary. A lot of us went into the profession not for the pay we got, but because we loved what we did."

For her husband, Dr. Quentin Lawson (School of Medicine, '55), MCG is where he first laid eyes on the nurse who stole his heart. The year was 1960.

"Joan was a beautiful young woman on (the pediatrics floor) with long blonde hair and a great personality," said Dr. Lawson, who was at MCG as a urology resident after completing a tour of duty with the U.S. Air Force. "She was eating a cone of ice cream and I fell in love with her the first time I saw her."

"He had asked a pediatrics resident, Dr. Mims, to introduce us," Mrs. Lawson recalled. "And Dr. Mims told me he wanted me to meet someone special, but he wouldn't tell me who. That went on over a period of weeks, and at last I said, 'You just have to tell me his name.' When he said 'Dr. Lawson,' I misunderstood and thought he said Dr. Lawpus, a pediatrician, so I thought he was just teasing me."

Word traveled through the nurses' dorm that night, and soon, Dr. Lawson called to clarify things and ask the young lady to dinner. A few months later, the smitten man proposed, and in October, the couple married.

Forty-five years later, the Lawsons have three sons and eight grandchildren. They've both retired – he from a urology practice in Valdosta, Ga., and she from administration in the Southern Training Institute, where she trained nurses' aides for nursing homes throughout the state via the Workforce Investment Act.

They've both committed to MCG's financial future to help others attain the education and opportunities they received.

"I felt like it was a real privilege for me to be able to attend MCG," said Dr. Lawson. "I felt it gave me a better life to go there and graduate. It was a long way to go from Hahira, Ga., to medical school, and I was proud when I got there. I decided to give to MCG to provide some of what has been provided for me over the years."

Their generosity also springs from their perspective as patients: Mrs. Lawson is a two-time survivor of breast cancer.

When asked what advice they would like to pass on to the next generation of health care providers, both noted the importance of respect.

"Medical school graduates need to be compassionate with their patients and should spend as much time as possible with them," Dr. Lawson said. "Communicate with them and never feel above them. Above all, show patients the respect they would like to receive themselves."

"Be sure you love what you are doing, because that is the key in any profession," Mrs. Lawson advised today's nursing students. "I've seen nurses who seemed disinterested in their job, and I think that's the biggest tragedy. You have to have an intuition and sensitivity to the patient because there is more to learn than just the technical problems. Face-to-face contact, touch and respect are important to healing."

Ellen Jones

Options for Remembering MCG in Your Will

The Society of 1828

Imagine helping to finance the education of deserving young students who would have little chance for a health care education without your support ... or enabling MCG to recruit the world's best physician-scientists ... or funding research that will eliminate incalculable suffering.

Countless people contribute to MCG's mission in one way or another—and every contribution is sincerely appreciated. But a dedicated few make the difference in ensuring a critical mass of excellence, both for current and future generations. This has been the case since MCG's inception in 1828: a small, core group making the commitment to chart the university's future, and making a huge contribution to society in the process.

Can we count you among them? The MCG Society of 1828 invites you to consider a legacy that will improve society for generations to come.

The Society of 1828 recognizes the year that MCG first opened its doors by honoring those who have kept those doors open for almost 200 years ... and counting.

If you already support MCG, thank you. Your loyalty and generosity have helped MCG make great advances in improving health while reducing the burden of illness in society. If you haven't supported MCG in the past, or if you'd like to multiply the benefits of your altruism, now is the time to consider joining the Society of 1828.

Society members give cumulative gifts of $1 million or more to MCG in cash and/or through estate-planning methods. What does this generosity mean to MCG and your loved ones?

It means that MCG can break new ground in the biomedical sciences. As Georgia's health sciences university, MCG is on the cutting edge of advances in every segment of health care. Facilities including adult and children's hospitals, 20 academic/research centers and three research institutes provide second-to-none research and treatment for everything from common to life-threatening illnesses and injuries.

MCG advances already are improving prevention, diagnosis and treatment for countless diseases. Consider that cancer, almost certainly fatal just a few short decades ago, is now highly treatable in most cases. MCG's own research has helped turn the tide, and the university collaborates with other facilities nationwide and beyond to bring the latest advances to its patients.

A bequest of a fixed dollar amount.

A percentage of your estate, allowing you to keep the division of the estate residue in desired proportions regardless of its size.

A contingent gift in which funds go to MCG if a designated beneficiary predeceases you.

A trust that pays income to a designated individual for life, with the remaining principal to be given to MCG thereafter.

A gift in memory/honor of yourself, your family or a person you have loved or admired.

For more information, please contact Tony Duva at 800-869-1113 or aduva@mcg.edu.

MCG's primary mission is to prepare future generations of health care providers and biomedical researchers, ensuring that each generation enjoys better health than the one before. Its Schools of Allied Health Sciences, Dentistry, Graduate Studies, Medicine and Nursing offer second-to-none training for the most compassionate and high-achieving students you'll find anywhere.

Will you help keep the momentum going by becoming one of the dedicated few to optimize the university's potential? Your support can make a critical difference in helping MCG reach the next level as a premier health sciences university.

For more information about the MCG Society of 1828, contact me, Tony Duva, associate vice president for gift planning, at 800-869-1113 or aduva@mcg.edu.

Sincerely,

Tony Duva
Associate Vice President for Gift Planning
800-860-1113
aduva@mcg.edu

Information in this article is not intended as legal advice. For legal advice, please consult an attorney. Tax laws are subject to change.

News MAKERS

Lucy Marion, School of Nursing Dean, received the 2005 Public Health Nurse Creative Achievement Award from the American Public Health Association for her innovations combining teaching and practice to better prepare nursing students for public health service.

Dr. Darrell G. Kirch, dean of the School of Medicine from 1994 to 2000 and currently dean of the Penn State College of Medicine, has been named president of the Association of American Medical Colleges. His tenure will begin July 1.

Dr. Kalu Ogbureke, assistant professor of oral biology and maxillofacial pathology, has been named a fellow of the American College of Legal Medicine, which promotes interdisciplinary cooperation where law and medicine converge. Dr. Ogbureke has a doctorate in medical sciences and oral biology from Harvard University, a graduate certificate in the business of medicine from Johns Hopkins University and a juris doctorate from Suffolk University.

Dr. Iqbal Khan, professor and director of the In Vitro Fertilization/Andrology Laboratories, has begun a one-year term as a consultant for the College of American Pathologists' Reproductive Medicine Committee. The four-member committee makes recommendations to the college for new proficiency tests for reproductive laboratories nationwide.

Dr. William H. Salazar, internist and psychiatrist, has been appointed to the Behavioral Sciences Test Committee of the National Board of Medical Examiners. He has received a concurrent appointment on the U.S. Medical Licensing Examination 2006 Step I Test Mateiral Development Committee for Behavioral Sciences.

Dr. Dilip A. Thomas, director of oculoplastic surgery and neuro-ophthalmology, has been named a fellow of the American Society of Ophthalmic Plastic and Reconstructive Surgery. The society advances education, research and treatment in aesthetic, plastic and reconstructive surgery of the face, orbits, eyelids and lacrimal system.

Dr. Edmond F. Ritter, plastic and reconstructive surgeon, has had his contributions to academic medicine recognized in the Congressional Record of the 109th U.S. Congress. He was honored by U.S. Rep. Edolphus Towns of the 105h Congressional District of New York for accomplishments in reconstructive microsurgery, his role in training more than 30 plastic and reconstructive surgeons and his research to better understand tumor biology.

Dr. Gregory A. Harshfield, hypertension researcher and associate director of the Georgia Prevention Institute, has been named institute director. Dr. Harshfield, who joined the GPI in 1997, will continue research related to blood pressure regulation, particularly the impact of impaired sodium secretion following stress.

Dr. Abdullah Kutlar, hematologist and director of the MCG Sickle Cell Center, has been appointed to the Candidate-Gene Association Resource Steering Committee of the National Heart, Lung and Blood Institute. The 13-member committee will help direct federal research initiatives by identifying which candidate genes merit study for their role in specific diseases.

Dr. Max E. Stachura, director of the Center for Telehealth and Georgia Research Alliance Eminent Scholar in Telemedicine, has been re-elected president of the nonprofit Alliance for Public Technology Board of Directors. The alliance educates nonprofit groups and the public about technology and telecommunications services.

Welcome, NEW FACULTY

School of Allied Health Sciences

Dr. Lori Bolgla, assistant professor of physical therapy, has a special interest in sports medicine.

Sharon Chestnut, assistant professor of biomedical and radiological technologies, earned associate and bachelor's degrees from MCG.

Dr. Miriam Cortez-Cooper, assistant professor of physical therapy, will explore research and clinical interests of exercise to prevent cardiovascular disease and pediatric obesity.

Vivian Dicks, instructor of biomedical and radiological technologies, earned her degree from the University of South Carolina.

Dabney Eidson, part-time instructor of respiratory therapy, earned her bachelors degree from MCG.

Layton Fillion, an MCG alumna and assistant professor in the Department of Dental Hygiene, teaches junior/senior clinical sessions and dental materials.

Kimberly Hall, assistant professor of dental hygiene, is an MCG graduate and teaches dental hygiene theory/practice and practice management.

Michael Jensen has joined the Schools of Allied Health Sciences and Medicine as an adjunct faculty member, serving as medical illustrator for neurosurgery. Prior to joining the faculty, the MCG graduate lived in the Boston area animating *Curious George*.

School of Dentistry

Dr. Barry Hammond, assistant professor of oral rehabilitation, comes to MCG from private practice in Greenville, S.C. He is a member of the American Dental Society, the Academy of General Dentistry and the American Academy of Cosmetic Dentistry.

Dr. Sajitha Kalathingal, formerly at the University of North Carolina at Chapel Hill, is an assistant professor of oral diagnosis. He is a member of the International Association of Dentomaxillofacial Radiology and the American Academy of Oral and Maxillofacial Radiology.

Dr. David Lazarchik, associate professor of oral rehabilitation, comes to MCG from the University of Alabama at Birmingham. He is a fellow of the Academy of General Dentistry and American Association of Hospital Dentists.

School of Medicine

Drs. Paul A. Bilodeau, Teresa A. Coleman and **Thomas A. Samuel** have joined the Division of Hematology/Oncology to develop focused treatment and clinical research programs in areas including breast and prostate cancer. The researchers emphasize multidisciplinary collaboration and treatments that specifically target cancer cells with minimal side effects.

Dr. Brian Kirkpatrick, professor and vice chair of the Department of Psychiatry and Health Behavior, is a psychiatric specializing in schizophrenia. He comes to MCG from the University of Maryland Psychiatric Research Center.

Dr. Kavita Natarajan has joined the Section of Hematology/Oncology after completing a fellowship in the specialty. Dr. Natarajan, a graduate of Baroda Medical College in India, specializes in bleeding and clotting disorders.

Dr. Gregory Postma, a pioneer in outpatient esophagus and unsedated larynx surgery, has come to MCG from Wake Forest University as a faculty member in the Department of Otolaryngology/Head and Neck Surgery and director of MCG Health System's Voice and Swallowing Center.

Dr. Saroj Sharma, assistant professor of general internal medicine, specializes in preventive medicine, hypertension and osteoporosis.

MCG Health System

David Karangu has been appointed by Georgia Gov. Sonny Perdue to a three-year term on the MCG Health, Inc. Board of Directors. Mr. Karangu, president and chief operating officer of Mercedes Benz of Augusta and Fairway Ford of Augusta, replaces Dr. Shirley Lewis, president of Paine College, who served on the board since MCG Health, Inc.'s activation in July 2000.

Campuswide

Bryan Mitchell, Health Careers Opportunity Program project coordinator, helps expand pipeline programs to increase the number of under-represented minority and disadvantaged health care providers in the state.

School of Nursing

Jacques H. Amole, instructor of biobehavioral nursing, earned his degree from East Stroudsburg University.

Julia Lowe Behr, part-time assistant professor of biobehavioral nursing, earned bachelor's and master's degrees in nursing from MCG.

Christine Barrett Berding, assistant professor of biobehavioral nursing, earned bachelor's and master's degrees in nursing from MCG.

Judy K. Glaser, part-time instructor of biobehavioral nursing, earned a bachelor's degree in nursing from MCG and a master's degree from Georgia State University.

Donna A. Levitt, part-time associate professor of physiological and technological nursing, earned a master's degree in nursing from the University of Pittsburgh and a Ph.D. from Berne University.

Frances R. Martin, assistant professor of biobehavioral nursing, earned a master's degree from the University of Rochester and a Ph.D. from Florida State University.

Jo-Ellen M. McDonough, assistant professor of health environments and systems in the School of Nursing, earned a master's degree from Case Western Reserve University and a Ph.D. from the University of South Carolina.

Shirley Ann Quarles, part-time associate professor of health environments and systems in the School of Nursing, holds two master's degrees, as well as an Ed.D. from North Carolina State University.

Autumn Schumacher, assistant professor of physiological and technological nursing, earned a master's degree and Ph.D. from the University of Illinois Chicago.

Steven M. Whitney, instructor of physiological and technological nursing, earned a bachelor's degree in nursing from Georgia State University and a master's degree in nursing from Georgia College and State University.

CLASS notes

Carbon Stewart *(Department of Physician Assistant, '74)* is a part-time assistant professor of physician assistant at MCG.

Sharon K. Chestnut *(associate degree, '83 and bachelor's degree, '85)* has joined the MCG Department of Biomedical and Radiological Technologies as an assistant professor.

Dabney Marie Eidson *(Department of Respiratory Therapy, '96)* is a part-time instructor of respiratory therapy at MCG.

Juan Reyes *(bachelor's degree, 2000 and master's degree, 2005)* is a respiratory therapy instructor at MCG.

Kimberly Marie Hall *(bachelor's degree, 2001 and master's degree, 2003)* has joined the MCG dental hygiene faculty as a part-time assistant professor.

Brianna Michelle Whitworth *(Department of Radiologic Technologies, 2002)*, works in ultrasound at St. Mary's Hospital in Athens, Ga., and married Joseph Godfrey Hay Jr. Feb. 4 in Lawrenceville, Ga.

Cumi Layton Fillion *(bachelor's degree, 2003 and master's degree, 2005)* is a part-time assistant professor of dental hygiene at MCG.

Blaine Henry *(Department of Physical Therapy, 2005)*, received the 2005 Bella J. May Award, named in honor of a founding faculty member, in recognition of leadership and outstanding academic and clinical performance.

Dr. Virginia A. Merchant *('77)*, professor in the University of Detroit Mercy School of Dentistry Department of Biomedical Sciences, received the university's 2005 Outstanding Faculty Member Award.

Dr. Denise Ann Allen Brown *('97)* practices general dentistry in Suwanee, Ga., and married Robert Scott Brown Feb. 25 in Atlanta.

Dr. James L. Bland *('60)*, Aiken, S.C., has been named president-elect of the American Society of Bariatric Physicians. Dr. Bland is a diplomate of the American Board of Bariatric Medicine. He holds a law degree from the University of South Carolina School of Law and is a fellow of the American College of Legal Medicine. He is a member of the South Carolina Medical Association and the Aiken County Medical Society.

Dr. Carl P. Weiner *('77)*, a nationally recognized leader in premature-birth research and the practice of fetal medicine, has joined the University of Kansas School of Medicine as professor and chair of the Department of Obstetrics and Gynecology. He recently received a $2.8 million Centers for Disease Control and Prevention grant to investigate causes of premature birth, which affects 12 percent of U.S. pregnancies.

Dr. Robert M. (Bo) Kennedy *('80)*, a pediatric emergency medicine physician at St. Louis Children's Hospital Emergency Department and associate professor of pediatrics at Washington University in St. Louis, has developed drug and behavioral techniques to ease children's anxiety in emergency rooms. He recently biked 3,000 miles to Alaska with his brother and bride, then spent a year there working and having outdoor adventures. His roles at Washington University have included associate director for educational affairs and director of the Pediatric Advanced Life Support Program. From 2003-05, he served as medical staff president, helping create a pain and sedation subcommittee. He also helped develop some of the original trauma center regulations for the state of Missouri.

Dr. Christopher Cates *('82)*, director of Vascular Intervention at Emory University Hospital and Emory Crawford Long Hospital, has been elected to the board of directors of the Society of Medical Simulation. He also has been appointed to the editorial board of the journal, *Simulation in Healthcare*.

Dr. Robert Douglas Foster *('85)*, Burlington, Ark., is an orthopedic surgeon who specializes in neck and back procedures. He is on the medical staff of Great River Health Systems and recently founded the Great River Spine Clinic. He started his health care career in 1973 by earning a bachelor's degree in nursing from MCG, then by putting himself through medical school working as a nurse.

Dr. Sallie A. Carter *('86)*, Anderson, S.C., recently received Mercer University's Walter L. Moore Humanitarian Award. After earning a psychology degree from Mercer in 1971, she coordinated Project Upward Bound to help prepare young people for college, then became educational director of the women's prison in Hardwick, Ga. She then graduated from Yale Divinity School and became the first woman chaplain of Sweetbriar College in Virginia. Next came her medical degree, which she earned while raising three children. Her private practice in Anderson includes mobile treatment to the medically underserved via a custom-outfitted recreational vehicle. She has never turned away a child and has provided free service to hundreds of families.

Dr. Glen Portwood *('89)* has joined Carolina Digestive Health Associates in Harrisburg, N.C. Board certified in internal medicine and gastroenterology, he completed his residency in internal medicine at the University of Virginia and a fellowship in gastroenterology at Duke University.

P.J. Johnson *('77)* has been promoted to chief operating officer of Trident Medical Center in Charleston, S.C.

Grace Newsome *('77)*, Dawsonville, Ga., has been appointed by Georgia Gov. Sonny Perdue to the Health Strategies Council, representing nurse practitioners. She is a professor of nursing and coordinator of the family nurse practitioner program at North Georgia College and State University and is a family nurse practitioner in Atlanta and Dahlonega, Ga. Ms. Newsome is immediate past president of the Georgia Association for Nursing Education. She and husband Billy have three children and eight grandchildren.

Dr. Karen J. Minyard *(M.S.N., '80)* has been appointed by Georgia Gov. Sonny Perdue to the Cervical Cancer Elimination Task Force. The task force was created in 2005 to produce two reports before disbanding June 30, 2006. Dr. Minyard is executive director of the Georgia Health Policy Center. She is an officer on the founding board of the Community Health Leadership Network and an associate research professor in the Georgia State University School of Public Administration and Urban Studies. She earned a Ph.D. from Georgia State University.

Christine Barrett Berding *(bachelor's degree, '83 and master's degree, '92)* is an assistant professor of biobehavioral nursing at MCG.

Julia Lowe Behr *(bachelor's degree, '88 and master's degree, '92)* is a part-time assistant professor of biobehavioral nursing at MCG.

Judy K. Glaser *('93)* is a part-time instructor of biobehavioral nursing at MCG.

Nicole Scalise Wimmer *('97)* has joined the MCG faculty as an instructor of physiological and technological nursing.

Lindsay Erin McClellan *(2005)* married James Dustin Keeble of New York July 16 in Lawrenceville, Ga.

Obituaries

Marsha Ann Brandon *(M.S.N., '75)* died Jan. 1 in Lithonia, Ga.

For the Record

We'd like to hear from you! To help us keep you up to date on what's happening at the Medical College of Georgia, please keep us up to date on what's happening with you. Please send this information to:

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THE AUTHOR WITH HIS GRANDFATHER AND (BELOW) WITH HIS MCG PLATE.

Reflections

THE WAY MY POP DID IT

by Brandon "Brad" DuBose Bushnell

It's more than a Wedgewood plate in our china cabinet. It's more than a unique graduation present. My Medical College of Georgia commemorative plate is a token from a great friend and a reminder to keep my love for serving others first and foremost in my practice of medicine...the way my grandfather did.

My grandfather, Dr. Bolling S. DuBose Jr. ('Pop' to me), was the rock of our family and of our community in Athens, Ga. When I was 7, he gave me a tour of St. Mary's Hospital in Athens and presented me with my first pair of scrubs—a foreshadowing of my now-daily garb. He knew everyone by name: nurses, patients, janitors....

Countless people over the years told me how grateful they were to have him for a physician. I remember thinking, 'That is what I want out of a career—a sincere relationship with a community.'

I was a junior at Vanderbilt University when Pop introduced me to his childhood friend and schoolmate, MCG Medical Historian in Residence Lois T. Ellison (School of Medicine '50). I felt like I was in my own grandmother's kitchen. She gave me a Coke and asked me about school. The subject turned to history—first the history of our respective universities, then a little personal history. She and Pop loved to heap accolades on one another about who was really the smartest and most popular at Athens High School and at the University of Georgia. She forever teased Pop about his decision to attend Bowman Gray rather than MCG for his medical education. She told me I could redeem the family name by going to MCG. She laid it on thick, saying the family name and pride were squarely on my shoulders.

I received an MCG scholarship, and Dr. Ellison and I developed a great friendship. I stopped by her office often for advice. It was like visiting the oracle at Delphi. Somehow, she always made me feel encouraged and energized.

Her running joke with Pop came full circle when both were on hand to see me graduate in 2003. And although she couldn't deliver the goods right away, Dr. Ellison promised me a graduation gift that would symbolize my accomplishment: a Wedgewood china plate featuring MCG historical sites by artist Marylene Williams and designer MariEdith Tanner. Dr. Ellison worked with the MCG Bookstore to create the limited-edition plates and ensure historical accuracy.

When the plates arrived this past December, Dr. Ellison made sure I was one of the first to receive one. Pop didn't live to see it; he died two years ago, shortly after my graduation. Just as the plate symbolizes my bond with MCG, the timing of Pop's death seemed to symbolize the passing of the torch.

My family chose a framed quote in Pop's office to engrave on his tombstone. We think it says it all:

To cure – Sometimes.
To relieve – Often.
To comfort and support – Always.
Dr. Edward Livingston Trudeau ❧

Editor's note: The MCG commemorative plate is available at the MCG Bookstore for $56.96.

MEDICAL COLLEGE OF GEORGIA TODAY WELCOMES SUBMISSIONS TO THE REFLECTIONS COLUMN OF THE MAGAZINE. TYPED ESSAYS (APPROX. 750 WORDS LONG) REFLECTING A PROFESSIONAL OR PERSONAL EXPERIENCE OF A MEMBER OF THE MCG COMMUNITY SHOULD BE SUBMITTED TO:
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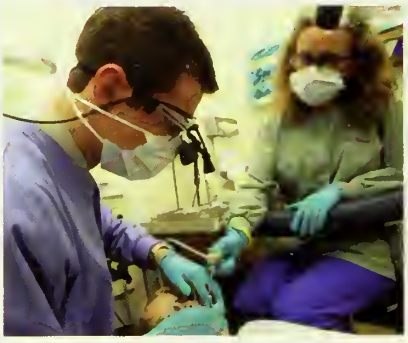
All Smiles



MCG dental and dental hygiene students and faculty, along with volunteer dentists and dental hygienists, provided free dental care for approximately 120 Augusta schoolchildren during the third annual Give Kids a Smile Day Feb. 3.

Match Day 2006

Britt Sommerville (from left), Nicholas Campbell, Jenny Martinez and Adrienne McMillan were among 152 MCG medical students who participated in Match Day March 16 to determine where they will complete their residencies.

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